THE GENESEE FARMER

Vol. XIV. ROCHESTER, N. Y., SEPTEMBER, 1853. No. IX.

AGRICULTURAL SOCIETIES—THEIR USES AND ABUSES.

Agricultural Societies, of which there are some three hundred in the United States, may now be reckoned among the fixed institutions of the country. Being in infancy, and the offspring of popular feeling, it would be strange indeed if they were not sometimes perverted from their legitimate use to advance the interests of the few at the expense of the many. Nor is it an easy matter to prevent designing men from taking a leading part in associations for the promotion of agriculture, in order to give public premiums, publications, and exhibitions, such direction as will aid them in selling at a large profit their neat stock, pigs, sheep, poultry, or patented implements of husbandry. Abuses grow up as naturally and luxuriantly in all popular bodies, as weeds in a rich garden; and the extirpation of the latter is not more useful in horticulture, than the correction of the former in all agricultural societies. Their officers and members should guard against either commending or advertising, through the medium of their published proceedings, unworthy objects. It is easy to injure the public, and the character of the association. In State societies, an impartial observer may often discover a few gentlemen of wealth, who are engaged in rearing Short-Horns or other stock to sell at high prices, becoming year after year Presidents, or ruling members of executive committees, and State boards, not to develop new truths in husbandry, or advance agricultural knowledge, but to perpetuate the power and profits of an ambitious clique. Such characters, by their monopolies, prevent the true friends of the farming interest from encouraging the systematic study of rural economy, and the growth of a wise and valuable agricultural literature. Literature and science can never be incorporated with American agriculture, until agricultural societies think less of idle shows and private speculations, and more of illustrating the true principles of tillage and husbandry. This is the legitimate object of all organizations, composed mainly of practical farmers. A thorough knowledge of principles will most benefit them in their noble calling; and their annual agricultural exhibitions might be exceedingly instructive by demonstrating the most important truths in rural affairs. Do our cattle shows now demonstrate any such truths? We think not. It is rare indeed that a new fact of any value is brought to light at a well attended county fair, or State exhibition.

Inventors and manufacturers of new machines reap some advantage in bringing their wares before the crowd; but it would not diminish their gains if provision were made by a proper use of part of the funds of the society to teach its members something more than they before knew of agricultural entomology, and other kindred sciences. Insects, like wheat flies, weevils, and moths, are annually destroying crops to the amount of millions, without the least public effort being made to lessen the evil. Does it argue well for our general intelligence that no agricultural society in this most prosperous

republic has ever appropriated a dollar to foster the study of Insects? A distinguished and ingenious artist not long since explained to us a contrivance of his own invention for the wholesale destruction of those destructive pests which damage our gardens, orchards, and field crops so often, and so ruinously. With a little assistance from an agricultural or horticultural society, he might render the country an invaluable service.

No provision is made in these associations to meet the pressing wants of men of deep study and small funds — who labor to benefit the professional cultivation of the earth.

Who can tell how much of the substance of the soil is consumed in the ordinary production of a bushel of wheat, or a bushel of corn? This important information may be obtained by any agricultural society that really desires to enlarge the boundaries of our knowledge of the elements of fertility in cultivated land. In the growth of a plant on an arated surface, the earth parts with some of its mold and minerals. What per cent. of these is lost, which never enters cultivated plants at all? Would it not be a wise use of the funds of an agricultural society to investigate the facts as to what the soil loses by tillage when cultivated as for a crop of wheat or corn, by the decomposition of its mold and the washing of its salts? How much of the mold is dissipated in the atmosphere as is the substance of a compost heap by frequent turning? If no effort is to be made to increase our knowledge of the philosophy of agriculture, why expend time and money in attending shows and supporting agricultural societies? Idle hands and addled heads may seek trifling amusements; enlightened, thoughtful men, ask for more of solid instruction, and less of humbug and personal favoritism. They may readily obtain a reform in the management of State and county societies, where reform is needed, by calling attention to existing abuses, and insisting that the association shall do as much to increase as to diffuse knowledge. Our societies now diffuse very little information among the masses, for the simple reason that they really have nothing new and useful to communicate. Men must learn before they can teach; and we beg to learn when agricultural learning is to be kindly taken by the hand and helped forward by the associated farmers of the United States? From 1817 to 1853 we have been in the way of attending agricultural meetings and shows, and we can not see that a fat ox, sheep, or hog, is any better now than those exhibited in our boyhood. Thirty-six years ago young farmers desired to know how much grass was necessarily consumed to form a pound of good cheese, or one of butter. This information is as desirable now as it was then. Agricultural societies have done nothing to elucidate the relation that vegetable food bears to animal products. Are the ruling spirits in all agricultural bodies fully resolved to make no progress, and to set their faces as flint against the critical study of wool-growing, stock-breeding, and dairy-husbandry? A good cow separates from her blood a pound, or pint, of milk every thirty minutes, for days and weeks together. This rapid conversion of grass into blood, and blood into milk, has never attracted the attention of an agricultural society in this nation, which probably contains more cows than any other. Why not offer premiums for cows that will produce the most butter and cheese from a given quantity of food? Researches of this kind might show that our native dairy stock surpasses any recently imported high priced animals for the economical production of milk. Give all an equal chance, and let truth and demonstrated superiority prevail. Nearly all experiments are sadly defective, and lead to no conclusive results. Our proverbial impatience jumps at conclusions, which, being erroneous, mislead just as far as they are trusted. Ignorant men deceive not only themselves, but hundreds of others. The exact relation that grass, hay, roots, and grain, bear to milk, butter, and cheese, to beef, pork, wool, and mutton, might be ascertained and known to every one of the five millions of farmers in the United States, if agricultural societies would take the matter in hand. Experiments alone are needed.

ON FEEDING HORSES, AND PREVENTING GLANDERS AND FARCY.

A DISTINGUISHED veterinary surgeon, Professor DUN, of the Edinburgh Veterinary College, calls attention to the following errors in the dieting of farm horses, which are not less common in this country than in Scotland.

1st. Much too long an interval is allowed to intervene between the times of feeding. Horses are frequently worked six hours consecutively, during which time they receive no food whatever. This practice has been found by experience to be prejudicial to their health, inducing debility and predisposing to diseases of the digestive system. The natural habits and digestive organs of the horse alike prove that he is not designed for long fasts; as the smallness of his stomach indicates the necessity of supplying it with comparatively small quantities of aliment at short intervals. When at liberty, he eats during twenty out of the twenty-four hours. This natural habit may be modified, but pains should be taken not to run into the opposite extreme. A horse or mule when at work through the day on the farm, should have some nutritious food every five hours at the outside, if the purpose is not to impair his constitutional powers. When a plow team is taken up early in the morning, and expected to work till noon before regular feeding, it is the present practice of the best Scotch farmers to give each horse a lunch of a pound or more of oat-meal or bean-meal cake between nine and ten o'clock. Some prefer to mix oat and bean or pea-meal, which is wet with water and "fired" or baked; the cooking enables the digestive organs to render the nutritive elements at once available for the support of the exactions of labor. Dr. DUN is acquainted with several farmers "who give these cakes whenever the work is severe and the hours long, and all of them agree that their horses are now in much better heart and condition, and less frequently attacked by indigestion and cholic, than they were when subjected to protracted abstinence, and without any intermediate meal."

2d. Food may be improper on account of over quantity, excess of nuritiveness, or bad quality. By taking too large a quantity of food into the stomach at once, the immediate bad consequences may be wind cholic, inflammation of the bowels and the surrounding membranes, a founder; and occasionally, the swelling of food eaten dry causes a rupture of the stomach or intestines. An animal scantily fed from day to day, sometimes gets loose and finds access to a bag or bin of grain, and being hungry, gorges himself almost to suffocation; or a bad servant may feed to excess, and out of all reason. We have frequently wondered why grain or water taken into the stomach of a horse should so immediately affect his feet, producing the inflammation called *laminitis*—an inflamed state of the extreme vascular membrane or lamina of the hoof. Let us see if we can get at the philosophy of a common founder. A translation of a positive disease from one part of the system to another, by what doctors call *metastasis*, is common enough; but a horse may be foundered where there is no positive disorder in the digestive organs, and only an unnatural irritation from the presence of water or food improperly taken into the stomach. The exercise and heating to which he has been subjected on the highway or elsewhere, have brought the vascular and tender parts within the hoof into a condition approximating inflammation, before either water or food is swallowed. The antecedent hard service of the feet is a material fact in the case; for without previous driving, and too often hard driving, an acute founder is seldom seen. A sudden shock is inflicted on the nervous system in the stomach, which is sound, and its force shatters first, not the sound stomach, but the heated, enfeebled, and partially inflamed feet, which are connected with the stomach by abundant nerves. If the feet of a horse be covered with water this revulsion from the stomach to the lamina of the hoofs seldom occurs to an injurious degree. This brief explanation indicates the propriety of bleeding, and letting a recently foundered horse stand in a stream of water to cool his feet. Give him rest and physic. Proper feeding implies the use of neither too much nor too little grain,

and a due proportion of hay, corn blades, shucks, straw, pea-vines, or other forage, which had better be cut before it is consumed. If this forage is sound, bright, and was harvested at the right time, less grain will suffice to keep horses in a good condition. Where one has neither hay, nor blades, nor straw, much care should be had lest highly nutritive food, like corn, produce eruptions on the skin, enlargement of the liver, yellow water, and other maladies. If no other bulky forage can be had, horses should have browse with their grain to aid in distending the stomach and intestines; for bulk is an important element in healthy digestion.

Glanders and *farcy* have a common origin, the vitiated state of the blood, and are regarded as only different stages of a progressive disorder. As induced by insufficient or bad food, farcy usually appears first; and may continue for some time before any symptoms of glanders present themselves. Farcy is characterized as an unhealthy inflammation of the absorbent vessels and glands, which become swollen from the deposition of lymph, and soon ulcerate and discharge matter of a morbid and varying character. The poison from farcy-buds is carried in the blood to all parts of the body, and under favorable circumstances, rapidly produces itself. Tubercles are formed in all the lymphatic glands and in the substance of the lungs. Ulcerations appear on the mucous membrane of the nostrils, which is attacked on account of its high vascularity. Those parts first undergo disintegration which require for their healthy existence the largest amount of blood. Between the first symptoms of farcy and glanders, and the fatal termination of the disease, a very variable time intervenes, according to the strength or feebleness of the constitution, and the virulence of the malady. Whatever impairs the general health, or in any way vitiates the integrity of the system, may be regarded as a cause of glanders. It follows colds, influenzas, strangles, diabetes, and perhaps all other debilitating affections incident to bad shelters, over-work, and insufficient food. Like all other diseases that mark the premature loss of vital power, farcy and glanders are much easier prevented than cured. When from any cause the glands, mucous or serous membranes of an animal become inflamed, while its general health and constitution are yet unimpaired, the purulent or aqueous secretions that may ensue, as in colds or common distempers, are of a healthy nature, and they serve to work off the inflammatory action, which results in a speedy and perfect recovery. To maintain the stamina of life in full vigor in all animals of any value, is an object of great importance; for the principle applies to persons as well as to beasts and birds. Proper care and protection, avoiding all extremes and unnecessary exposures, and feeding regularly, that the system may never be surfeited by an exess of nutrient matter in the digestive and assimilative organs, and never weakened by a deficiency of the same, are the cardinal points in animal physiology to be kept constantly in view. All infected animals should be removed from those still undiseased, lest the exhalations from the former, and perhaps direct contact, communicate the distemper to the latter. In systems pre-disposed to any malady, it requires the least possible poison, acting as leaven, to excite a morbid action in organs previously in an apparently sound condition. Under skilful treatment, glandered horses sometimes live and perform labor for a number of years. This, however, only proves what every close observer must have witnessed, that had the same care been taken of health before it was partially sacrificed, that was exhibited afterwards, no injury of the kind would have occurred. When medical men shall come to understand their noble mission, and the people comprehend their true interests, the *prevention* of maladies, not their *cure*, will be the grand purpose of what is now the Healing Art. Physicians ought to be better paid for the patient study and wisdom that prevents sickness, with its pains, loss of time, and other incidental expenses and misfortunes, than for the less skill of treating diseases according to the prescribed rules and theories of the profession.

HISTORICAL MEMORANDA.

NUMBER ONE.

THE time is not remote when the agricultural history of this country will command quite as much attention as its political or military history; and it is the duty of such as possess evidence not known to the public, showing the progress of agriculture, the difficulties encountered, or surmounted, to contribute the same as a part of the rural literature of the age. History will concern itself with facts and principles, and with little beyond.

It has suited the purposes of the *New York Tribune*, *Albany Evening Journal*, *Rochester Democrat*, and other journals that sympathise with them at the North, as well as several ultra sectional papers at the South, to attack the proprietor of the *Genesee Farmer*, and represent him as the active partizan of the late Administration, and the particular favorite of Mr. FILLMORE. Similar charges are substantially preferred by the *Boston Journal of Agriculture* of May last, in the following words:

"Our Caleb Quotem, who is at once an M. D., editor of two agricultural papers, publisher of one or two political sheets, and *political stump-speaker*, Agricultural Clerk in the Patent Office, and seed-raiser in general to the same."

Allowing the above statement to be all true, which it is not, it would appear that this "M. D." is an industrious man, which is more than can be said of some of his assailants. As to the assertion that we raised seeds for the Patent Office, it is wholly untrue. We were never employed to grow seeds of any kind for government, and never was paid a dollar for such service. "Mr. SOULE, chairman of the committee on Agriculture in the Senate, introduced, by *unanimous* consent, a joint resolution to provide for the production of seeds required for distribution at the Patent Office. The resolution appropriated one thousand dollars to produce such improved seeds of grain, grass, and vegetables, as may be wanted at the Patent Office; the same to be expended under the direction of DANIEL LEE, Clerk of the Agricultural department of said office."

So soon as this resolution appeared in the proceedings of the Senate, it was appended to a note from the Secretary of the Interior, of which the following is a copy:

"MARCH, 27, '52.

"SIR: I beg leave to ask whether the above resolution was submitted at your instance.

"Very respectfully, your obedient servant,

"DR. DANIEL LEE. "ALX. H. H. STUART."

The letter of Mr. STUART received the following reply:

AGRICULTURAL ROOMS, PATENT OFFICE, March 29, '52.

SIR: I have the honor to acknowledge the receipt of your note of the 28th inst., in which you ask if a resolution therein mentioned, and offered by Mr. SOULE in the Senate, "was submitted at my instance." I answer, that it was not. I have the honor to be,

Very respectfully, your obedient servant,

Hon. ALEX H. H. STUART, Sec'y of the Interior. DANIEL LEE.

Had the Secretary been friendly to the Agricultural Clerk, or had the latter been a partizan of the President, as has been a thousand times falsely asserted, a member of the Cabinet would not have opposed the resolution of the chairman of the Agritultural committee, and attempted to hold a subordinate clerk in the Patent Office responsible for the official action of a United States Senator. As a personal favor to the Agricultural Clerk, Mr. SOULE did not press his resolution to its final passage, which he introduced at his own instance, because two-thirds of the seeds distributed he knew to be dead and worthless.

The fact was known to many Senators and members of the House, that we did every thing in our power to prevent the sending out, under the patronage of the government, so many very common and valueless seeds; but we were constantly over-ruled by one whose character is drawn to life by Dr. STANSBURY in the following letter:

WASHINGTON, January, 7, 1853.

DEAR SIR:—I received your note of yesterday, making inquiries with regard to my knowledge of Mr. EWBANK's character and conduct while Commissioner of Patents. I regret the necessity which impels you to call upon your friends to sustain you in a controversy with such an antagonist; and as a matter of personal feeling, I should have greatly preferred remaining silent. But I have seen the unjust and unwarrantable attacks made upon you by Mr. EWBANK, in the *Tribune* and other papers; and I can not refuse to give you the benefit of my humble testimony in the establishment of the truth.

I feel sure that wherever you and Mr. EWBANK are both known, nothing he could say could have the slightest influence in injuring your reputation. You ask me what was Mr. EWBANK's character for truth in the office; and whether I know of any instances in which he was guilty of falsehood.

I am constrained to say that his character for truth was *bad:* I have frequently known him to be guilty of gross falsehood, both in his official and personal dealings. He was accustomed to give verbal orders, and afterwards, when their consequences showed them to have been injudicious, or bore hardly upon himself, to deny that he had given them, and throw the blame upon those by whom they were obeyed. In one case, I knew him to dictate to a gentleman *what he should remember;* and in another, to order a clerk to certify to an account (his son's) of which he knew nothing. I have also known him to direct work to be recounted, in order that more pay might be given for it (to his son), when it had already been liberally counted, according to the usage of the office. I have further known him to employ persons to do work for his reports under promise of payment, and when the work was done and used, to refuse payment, and deny having promised it.

With such a knowledge of Mr. EWBANK's conduct, I could not believe him even under oath, in any case in which his passions, or his interests were concerned. This opinion is strengthened by the fact that he is an avowed disbeliever in all those sanctions which are supposed to give peculiar solemnity and obligation to an oath.

You ask me what was Mr. EWBANK's treatment of his official subordinates? It was characterized at sometimes by a coarse and vulgar familiarity, and at others by a rude disregard of their feelings, almost brutal. It has never been my misfortune to meet a man in a high official position, who knew so little what belonged to it; or who was so entirely destitute of the appearance, bearing, and manners of a gentleman.

In conclusion, allow me to add that Mr. EWBANK, so far from being the political martyr he would have the public believe, has been defended, protected, and adhered to by his official superiors, with a perseverance as remarkable as it was unfortunate; and he was removed at last only when his mismanagement threatened the utter and irretrievable ruin of the Bureau over which he presided. In quitting it, I have yet to learn that he has left behind a friend, or carried away the respect of one of his official associates. I remain, dear sir, very respectfully yours,

Dr. DANIEL LEE. CHAS. F. STANSBURY.

The author of the above letter has been some eight years in the Patent Office, is Secretary of the National Institute, and was the representative of the government at the great London exhibition, whose report has been printed by Congress.

We know of no good reason why the readers of the *Farmer* should not be informed of the character and conduct of their public servants at Washington, so far as the promotion of agriculture is concerned. We shall state only facts, and let others draw inferences. The charge that we have made, since our connection with the agricultural press, "political stump-speeches," is false. So far from the truth is it, that at the two last Presidential elections we refused to vote at all, although at the polls and entitled to vote. Nor have we ever smuggled in, as many do, a political bias in our agricultural writings. It is due to history that the causes which have prevented any success at the federal metropolis, by those who have toiled for the great farming interest, should be recorded. There has been, and still is, a great deal of corruption in Washington; and we can hardly render the country a better service than aid in its exposure, to secure a much needed reform at some future day.

In reference to the agricultural progress of the several States, we have private vouchers enough to fill a large volume, some of which we shall publish from time to time under the head of "Historical Momoranda." In a work entitled "The Future Wealth of America," by FRANCIS BONYNGE, on page 52 may be found the following:

"Taken from the three daily papers of Charleston, S. C.

"At a meeting of the Agricultural Society of South Carolina, held at their farm on Tuesday, 15th inst., (July, 1851,) the enterprise of Mr. BONYNGE, late from India, to introduce tea-culture, as well as that of coffee, the date, mango, indigo, and other tropical plants, into the State, was brought to

the notice of the Society. Mr. BONYNGE being present, the Society came to the resolution that the enterprise is a laudable one, and calculated to advance the prosperity of the country. They highly approve of the views of Dr. LEE, of the Patent Office Department at Washington, as *published in the daily papers of our city recently*, and tendered to Mr. BONYNGE the use of their farm on which to commence his experiments. (Signed) JOS. O'HEAR, Secretary.

What the "views of Dr. LEE" were, of which the South Carolina State Society "highly approved," will appear at another time.

Under date of "Nashville, August 2d, 1851," MARK R. COCKRILL, Esq., writes to us as follows:

"DEAR SIR: Your esteemed favor of the 24th ult. is received, covering a communication on the subject of a National Agricultural Society. I have shown it to one of our editors, and it will appear next week in the *Banner*. The object at which you aim meets my decided approbation; but I regret to say that we have no State Society now founded to unite in aiding this national project."

To promote the organization of State and county societies where none existed, we have labored for years, with a view to unite the whole in one combined effort, and thereby elevate the profession of agriculture above all other professions, whose numbers and wealth are so much inferior. Why can not all cherish sufficient patriotism to embrace their whole country, and cordially co-operate for the advancement of a great and common interest?

TEA-CULTURE—THE INTRODUCTION OF TROPICAL PLANTS INTO THE UNITED STATES—THE VITAITY OF SEEDS, &c.

ALTHOUGH the following letter was written more than three years ago, yet, if we mistake not, it contains facts and suggestions that will interest the reader:

GENTLEMEN: Believing that a judicious experiment to introduce the culture of tea-plants, and the manufacture of tea in the Southern States, will prove successful, I desire to make a few suggestions on the subject, as my name has appeared in the *Courier* in that connection.

The Horticultural and Botanical Societies of London, Paris, and Berlin, have had large experience in procuring both seeds and plants from all parts of the globe, and they have found, what few Americans seem to understand, that seeds sprouted, and thereby transformed into young plants, may be conveyed by sea in all latitudes with much greater safety than undeveloped germs, whose vital principle is destroyed by slight changes in the oil, starch, sugar, or protein substances contained in seeds. Without the presence of atmospheric air or moisture, the natural heat of a tropical climate will effect chemical changes in the organized elements in most seeds and buds, which prove fatal to their vitality. Young plants, not seeds, should be brought home.

So promising is tea-culture in the British possessions in Asia, that great efforts are now making to extend the business. The *London Gardeners' Chronicle*, received by the last steamer, announces "the most gratifying and important intelligence, brought by the Indian mail, that Mr. FORTUNE'S labors in procuring a supply of the finest tea-plants, and Chinese workmen had reached a successful issue." He brought to Calcutta, from the most celebrated tea districts, eight experienced manufacturers, the first that ever left their native country, together with a large assortment of implements, 17,000 *germinating* seeds, and 1,749 tea-plants. Government took so deep an interest in Mr. FORTUNE'S enterprise, that it furnished a steamer to convey him, his Chinamen, plants, and implements up to the plantations of the Tea Company, which already produce about 200,000 chests.

Many Chinese are beginning to emigrate to California, and tea-plants might easily be procured at Shanghæ, from which port there was shipped to the city of New York 8,423,692 pounds of tea from July 1, 1850, to February 1, 1851; and during the same seven months 17,038,125 pounds were exported to England. (See *Merchants' Magazine* for June, page 749.) Without troubling you with the detail of information gathered from various sources, I feel warranted in expressing the opinion that the time is not far remote when Southern enterprise and field hands will excel the Chinese as much in the simple operations of picking and curing tea leaves, and growing the trees, as they now do in growing, picking, and ginning cotton. In case an experiment is to be tried, a few skillful manufacturers from China should be procured as soon as a plantation affords any considerable quantity of green leaves. Steamers will soon make regular trips between Shanghæ and San Francisco, and if one familiar with horticultural operations, or vegetable physiology, is employed to procure young plants, any desirable number may be obtained. In putting up two cases of camelias from the Botanic Garden of Calcutta, Mr. FORTUNE mixed tea seeds with moist earth in China, and when the ship arrived at Calcutta he took out 16,000 seeds which were sprouted and growing.

This republic is probably the only civilized nation in the world which has no national society, either botonical, horticultural, or agricultural, to promote the introduction from abroad of whatever is useful or ornamental in the vegetable kingdom; and yet it is not easy to find under one government so wide a range of climates equally favored by seasonable rains for the almost boundless production of the valued fruits of the earth. Because a good Providence has done so much for us, shall we ungratefully refuse to do any thing for ourselves? Instead of importing from year to year so many bushels of *dead seeds to throw away*, through the government agency, it should give one-half the money expended for agricultural purposes to an independent board or association, fairly representing the agricultural interests of the whole country, and let such association transact a strict professional business, in a common sense and scientific way. If the friends of rural science and improvement at the South will unite with those of the Middle, Northern, and Western States, I have reason to believe, from some correspondence on the subject, that such a society may be organized on a permanent basis. Life is wearing away, and is always uncertain, and whatever good we intend to do in our generation we had better be about it. Is it not plain to every reader that the agricultural interest of the United States needs nothing so much at this time as an intelligent working head? Neither talent, nor patriotism, nor money is lacking; nothing is really wanting but *organization* among the friends of agricultural improvement to achieve the most honorable and useful results. Science belongs to no party nor section; and hitherto it has done next to nothing for the owners and cultivators of American soil. Is this always to be our condition? For one I do not believe it. Knowledge is too valuable for that, and something effective will soon be done to turn the labor, the capital, and the intellect of this country to a better account. There are before me wheat and oat plants, grown expressly to test the natural inherent powers of different seeds to yield unlike crops when treated alike in fertility of land and tillage; and the result is a difference in product of sixty per cent. in the oats, and forty-six in the wheat. How few planters, farmers, or gardeners have ever measured the vital force of different seeds? Friends, vegetable and animal physiology should no longer remain a sealed book. Let us open it and read the first lesson.

Yours, respectfully, DANIEL LEE.

Strange, is it not, that the young men of this country cannot be persuaded to study the vital force of seeds? Farmers often change their seed wheat, seed corn, and other seeds, to obtain more vigorous germs. Why, then, should not the natural laws which govern both the improvement and deterioration of agricultural seeds and plants, fruit and forest trees, command our best attention? To the popular mind, vegetable and animal physiology are indeed a sealed book. If the United States had an efficient national society to employ such a man as FORTUNE to introduce Tea-Culture, the country would soon possess another staple second only to that of cotton in its commercial advantages. But for some reason our three hundred agricultural societies fail to sympathize with each other. They remind one of the dark ages under the Heptarchy of England, when seven kings were armed to the teeth, ever ready, and ever expecting battle. It is the deplorable want of civilization that makes us expend a thousand dollars at militia trainings, and for military purposes, where we give one to increase our agricultural knowledge.

STUDY THE INSECTS THAT DAMAGE THE FARMER.

FOR some reason Agricultural Entomology is less studied and understood than almost any other branch of rural knowledge. This general neglect of an important science is doubtless one cause of the alarming increase of destructive insects in many parts of the country. Let the subject be fully and critically investigated, and the result will show that man unwittingly destroys thousands of birds which Providence intended to subsist on insects, and keep their larvæ from devouring the farmer's wheat and other grain, and the gardener's vegetables and fruits. If we study Nature's laws, we shall discover the important fact that no great class of animals, or plants, can be exterminated without inflicting severe and irreparable damage on the human family. Even insects perform important functions in the economy and exact balance of organic nature. Subsisting mostly on vegetable substances, they check the strong tendency, in many districts and countries, to the over-production of plants. If there were no insects and no birds, the existing relations between the animal and vegetable kingdoms could not endure a year.

The order of Nature would be broken up, and the growth of forests and grasses would extend out of all proportion, as compared with the graminivorous and carnivorous mammalia. The change might not arrest public attention at first, but soon the new order of things would indicate the usefulness and necessity of both insects and birds. These were created because *the plan* of the Creator would be incomplete without them.

If this feebly expressed view of created beings be sound, man can not nearly exterminate the birds of a country and not, in effect, augment indefinitely all the insects that prey upon his crops, and greatly annoy his domestic animals. We wish to lay the axe at the root of the tree, and show that natural laws demand the multiplication of the beautiful feathered tribes, whose music has a deeper meaning as the voice of the Invisible, than man with his murderous guns has yet dreamed of.

Suppose the State of New York had a thousand robins where it now has one; how many caterpillars, moths, worms, grubs, and other voracious insects would these birds consume? If public opinion were only enlightened on this subject, so as to protect all insectivorous birds, we should soon cease to complain of curculios, weevils, peach tree and apple tree borers, pea-bugs, and a hundred garden bugs, flies, snails, grasshoppers, locusts, cotton, and tobacco worms. We have had opportunities for studying most of these depredators, and regard the unnatural destruction of birds, or their expulsion from all so-called civilized communities, as the principal cause of the increase of insects. The reproductive powers of these is incredible to one who has paid no attention to entomology. There is not an animal nor a plant known to science upon which no insect subsists. The larvæ of mosquetoes consume myriads of infusoria that grow in stagnant water. The millions of "wigglers" that may be seen in reservoirs of rain water, grow and wax fat on something more substantial than air or pure water. By consuming the organized elements in which decay has already commenced, insects often purify water and the atmosphere. The young of a common flesh-fly adds 200 fold to its weight in 24 hours. This can only be done by the enormous consumption of very nutritious food. Imagine an ox that weighs 1000 lbs. adding 199,000 lbs. to his weight in a day, or a year!

If it were not for the fact that insects destroy one another, and thus keep down their numbers, they might, perhaps, entirely exterminate all other living things, and then die from starvation, leaving not a plant nor animal on the globe. Among all the 100,000 different plants, and 200,000 or 300,000 different animals, how wonderful that no family of either obtains the mastery, and rules supreme! Plants and animials maintain a perfect republic; the balance of power between them all is complete. Man, by his superior endowments, is able to disturb this comprehensive and delicate balance more than any other order of beings; and he can never fulfil his high destiny until he studies, comprehends, and obeys the laws of his Maker. To this standard our agricultural and horticultural knowledge and practice must rise before we have a right to expect complete success. Let us then study Nature and observe how nearly all the feathered tribes, with which we are familiar, hatch their young at that season of the year when insects and their larvæ most abound, when so many millions are daily consumed to feed the voracious broods of rapidly growing birds. In Maryland and Virginia, large flocks of turkeys are reared expressly to be driven through tobacco fields by children "to worm the crop." A turkey from the time it is large enough to eat a worm till it attains its full growth, will consume an incredible number of insects, and forcibly illustrates an important natural law. Barnyard fowls, doves, and pigeons may also be cultivated at a profit. Of all the works written on Poultry, we have never seen one that treated the subject in a truly scientific and philosophic spirit. When an adult turkey eats 100 ounces of dry corn, what will the excrements formed by this corn weigh after they are dried? Who has investigated this matter?

In their relations to agriculture, both ornithology and entomology are much less

understood than many suppose. The learned and scientific men who have cultivated these departments of natural history, have been unacquinted with agriculture, and their language is too classical and little known for their books to be much read by farmers. In future numbers of this journal we shall endeavor to describe in familiar terms the habits and transformations of those insects most injurious to agriculturists.

THE BREEDING, REARING, AND FATTENING OF SWINE.

THERE is abundant room for the exercise of skill and talent in the breeding, rearing, and fattening of swine. Of all nations, the United States have the greatest facilities for prosecuting this branch of husbandry in the most economical manner, by reason of the fact that Indian corn may be grown by American farmers on which to feed hogs, cheaper than in any other country. It is our superior natural advantages for keeping this class of animals that makes the swine of American husbandmen excel their sheep in numbers nearly ten millions. Tennessee has four times more hogs than sheep; and the business of producing pork, lard, and bacon for foreign consumption, extends much more rapidly than wool-growing, although a pretty high tariff has been brought to bear in favor of the latter.

Less attention is paid to the breeding of hogs, generally speaking, than to any other domestic animals. This neglect leads to their deterioration in many districts, particularly where pork or bacon is not a staple of agriculture. The remedy lies in keeping a smaller number, selecting both males and females with the greatest care as to form, quiet habits, tendency to take on flesh, and the females should be good nurses. Breeding in-and-in, or in too close relationship, is a common error with farmers who allow their hogs to run in large herds, and with little regard to males. Carelessness in the propagation of swine can not be too severely censured; for beyond all question it imposes a needless loss on the country of many millions of dollars every year.

One should breed large, or small, or medium sized hogs, according to the market, and the cheapness with which they can grow the food consumed by this kind of stock. As a general rule, hogs of medium size, well fatted, are most desirable, although instances are not rare where packers and hog buyers pay a premium for heavy porkers. They are said to cut up to a better advantage, and yield a larger cash return per 100 pounds. The intelligent farmer will readily learn what his market calls for, and meet it in the most economical way. Having wisely selected that breed which suits his circumstances best, he will not allow his sows to bring up more pigs than they can fairly supply with milk, unless he has the milk of cows to aid in pushing them forward in the first two months of their existence. Where hog-raising is prosecuted on an extensive scale, pigs are wholly dependent on their mothers for nutriment for some weeks when young; and then is the time when their constitutional powers and habits are mainly fixed for life. A pig once seriously stunted, is irreparably damaged; and we can not too earnestly insist on the policy of attempting to rear no more than one can feed well all their days. Cheap meat—that is, meat made at a small cost to the producer, is that which is the product of cheaply grown food, not that obtained from half starved pigs, shoats, and stock-hogs. It is all-important to the farmer who makes fat hogs his principal crop, that he understand the art of producing clover, peas, oats, and corn in the cheapest possible manner. Fresh clover fields are exceedingly valuable as ranges for large herds of swine; they may even be wintered on good clover hay, although corn, peas, oats and roots are cheaper winter feed. To produce meat at the minimum cost, whether pork, beef, or mutton, one must have rich land. The farmers of New York and New England can not compete successfully with those of the richest portions of

Ohio and Indiana in producing fat hogs, because they neglect to improve their lands with a view to have them equal to the best on the Scioto and Wabash rivers. To make millions of fat hogs on lean land as cheaply as it may be done on fat land, is an impossibility. But if the farmers in the Atlantic States will first fatten their land, it may be continued so as easily as any land at the West. One great advantage of pork-making is, the facilities it affords for the improvement of one's farm; for all the crops being consumed on the land, it regains not only the mineral elements of said crops drawn from the soil, but a considerable share of the organic elements taken from the atmosphere. It is impossible to rear and fatten hogs and not make a good deal of rich and valuable manure; but it is easy to allow manure to be dropped in the woods, or in low swampy grounds, where it is not needed, and where hogs are allowed to run. The art of rearing hogs at the greatest profit includes the husbanding of all the dung and urine produced by them in the best possible manner. In this way alone can one economically fatten his corn and clover fields as well as his hogs. Let them have both shelter and water in the lots where they feed, or are fed. While young they need a reasonable amount of exercise to develop muscle and bone, and for their health. In a state of nature in forests, swine take considerable exercise in searching for their daily food; and in this way they acquire great strength of limb and muscle, and remarkable constitutional powers of endurance. Many families of swine are injured by too high feeding when young; and this remark will apply to shoats, horn cattle, and some of the larger mutton sheep, as kept in England. Excessive fatness is so unnatural a condition as to amount to a positive disease; and if long continued from birth till death in a family, its constitutional powers will gradually fail, and the race become extinct.

There is a golden mein in this matter, which the stock-grower will do well to study and follow. If allowed to range in a good clover, pea, or oat field, growing hogs will take just the exercise that is best for them, and salt as well as water should be provided, adding a little sulphur and ashes. When put up to complete the fattening process, if one can not conveniently grind as well as cook the grain consumed, it should, at least, be boiled in large kettles. This is not an expensive operation, and cooking, by rendering the starch in corn or other feed soluble, like gum, materially increases the nutritive value of all grain and tubers fed to swine. This does not impair the quality of the manure, while it augments the yield of fat in the animal. Hogs should be kept reasonably warm, dry, and be regularly fed. As a matter of profit, care should be taken not to feed too long before selling or killing them. On the other hand, one may not feed long enough to attain the maximum profit. As in other departments of husbandry, experience and observation can alone make one skillful in the breeding, rearing, and fattening of swine.

THE CASTOR BEAN.—We find in the *Tropical Farmer*, published at Oceola, Florida, the subjoined letter on the culture of the *Palma Christi*, or Castor Bean, and the mode of expressing the oil. It was written by a gentleman of Perry county, Ala., to his friend at Tampa Bay:

You wish to get information as to the manner of raising the Castor Bean, and the yield in seed and oil to the acre, and the kind of press used for extracting the oil. I will endeavor to answer your queries as you have put them down, though as far as I have been engaged in it, I have lost money owing altogether to the difficulty of raising the seed in this climate. I have found in two years past that the crop promised to do well until the middle of June, at which time a drouth set in which cut off the crop. I have not been able to raise more than five bushels of seed to the acre. If a man could be sure of twenty or twenty-five bushels to the acre, and was prepared to manufacture the oil, it would be a good business. From the statements you make about its growth in your county, I should think good land ought to bring twenty-five to thirty bushels per acre, (46 pounds of seed is considered a bushel of Castor Beans, though mine did not weigh but 38 to 39 pounds to the bushel;) 46 pounds of seed ought to make two gallons of oil. I have cultivated two kinds, the large red and a green kind that pop out of the hull by laying them on a clean yard in the sun. I

have found here the green to be the best, though they require prompt attention in saving, or there is great loss in its popping out in the field. It must be cut as soon as the bottom part of the head begins to crack open. The red would require a mill something on the order of the rice mill to clean it, but would give good time to gather. I do not know which would produce the most in your country. The seed, I think, is equally good for making oil. We have another kind of green that grows here—seed quite small and hard to hull. This I do not think would be profitable on account of the difficulty in hulling, though they are rich in oil. I plant in rows five feet apart, and about three feet apart in the row. With you, if the same stalk continues to bear from year to year, I think a greater distance ought to be given. My press is made nearly like the four-screwed press used in compressing cotton—the wheels being made stronger, it requiring much greater pressure to extract the oil than to compress the cotton. To build such a one as mine now, would cost about $5000. I can press on mine in ten hours 100 gallons of oil.

They use at the north-west two kinds of press, one a simple screw, that works in a cast iron frame. This kind will cost about $250, and will make about twenty-eight to thirty gallons of oil in nineteen hours, if well attended to. The other is a hydraulic press, that costs, perhaps, $4000 or $5000, and would make, perhaps, forty or fifty gallons of oil per day. The barrels should be made of good white oak, and if not well made will not hold the oil. The process of clarifying the oil is rather a difficult one, and requires, to do it well, both practice and good judgment, as it has to be managed very differently in its different stages. The person who boils it must know from its appearance how to vary its management, or the temperature of the fire in the least mismanagement, will color the oil, and make it unsaleable. If boiled in its first stage too fast, it turns of a red color; if boiled too slow it has the same effect, as it leaves the impurities that should be thrown on the top and skimmed off in the oil, and stains it—if heated too hot it burns and colors it.

I will endeavor to describe the process that I used: The oil from the press should be strained into the kettle (which should hold about sixty gallons) through a coarse bag, made of coarse grass skirting—putting to fifty gallons of oil about six gallons of water—bring it to boil by a slow fire—after it commences boiling, keep it just at that stage that the dirt and scum will rise freely, (skim this off and put it in a barrel or tub to be strained in the next boiling, as a considerable quantity of good oil will be taken off with it,) when the dirty scum has all ran off, and the oil begins to have a somewhat milky appearance, the fire must be a little slacked, but kept high enough to cause the white scum to run off freely, which must also be skimmed off to be put with the next boiling. The oil, if well managed at this stage, will soon get quite clear, and will require less fire, as the water evaporates from it—it must be continued to boil quite slow until all the water has evaporated, which may be known by cooling some of the oil in a phial, set in cold water—if the water is all out it will be quite clear in the phial when cold, but as long as the least milky appearance is left in it, the evaporation must be kept up. Great care must be taken at this stage to prevent burning the oil—only fire enough must be used to keep it simmering—it generally takes from ten to twelve hours to complete a boiling. After it is done it must be strained through a thick satinet bag, into something which will hold oil, and left to settle a few days before barreling it.

I had forgot to mention that I have used about half a pound of loaf sugar dissolved in water, to be put in before or about the time it commences to boil. This, I think, aids much in separating the impurities from the oil.

If you should conclude to engage in this business, and I can give you any further information, I will do so with pleasure. You wished to know if there would be any market for the seed in Mobile or New Orleans. I do not suppose there would be in Mobile, but think they might be sold in New Orleans, to be shipped to St. Louis, at which place they bring a good price, varying according to the price of oil. When oil sells at 75 cents per gallon, seed, I think, is worth about the same price per bushel; when oil is worth a dollar, the seed would be worth about $1.20 or $1.25. If oil should be worth $1,50, seed would bring about $1.75 in St. Louis. It would, however, be more profitable to make the oil, if you can raise the seed advantageously.

Yours respectfully, R. W.

MANUFACTURE OF LIME.—The *Wisconsin* gives a description of some lime kilns, recently erected at Milwaukee by Mr. P. C. HALE:

"He has in operation one kiln, 16 by 20 feet in size, and 12 feet high, with an arched roof of brick, containing seven chimneys, and another kiln, nearly completed, much larger than the first, in which he can manufacture 600 barrels of lime per week, and is prepared to increase the number of kilns as fast as business demands. These kilns are so constructed that nearly an equal amount of heat is thrown upon each stone at the same time. In consequence of the arch no cold air reaches the top stones, and the whole contents of the kiln are equally burned, leaving no small stones half burned, as is inevitable in the old fashioned kilns. As it is neither burned too much nor, too little, it is purer and stronger than other lime. The kilns are so constructed as to save about one-third of the wood, and one-half of the labor of other kilns, and are burned in fifty-four hours, no matter how large the kiln. It is only necessary to keep the fires properly tended with suitable fuel, to insure a burn with as much certainty and accuracy, as the baking of bread in ovens."

THE LONDON DAIRIES.—The Yorkshire cow is the great favorite with the London dairyman, as she answers all the purposes of his trade, being a good milker, and when accident or old age renders it necessary to discard her, she is soon ready for the shambles. In Mr. BIGGS' dairy, 31 Edgeware Road, London, there are about 400 cows constantly kept; of these, the greater proportion is composed of the Yorkshire breed, of various degrees of affinity between the old Holderness and Durham breeds. There are also some of his cows which are longer in the horn than those already mentioned, and which are no doubt more allied to the original Holderness, or perhaps have long-horn blood in them; while there are others whose horns and general appearance indicate their close alliance with the improved short-horn or Durham breed. Of these, the most valuable is the cross between the Holderness and Durham, as being good, both for the pail and the butcher; on the other hand, the Holderness and long-horns give the richest milk, run soon dry, and are more difficult to fatten, while the pure short-horn gives least milk, but makes most beef in a given time. With these properties to choose among, it is not difficult to decide which of these breeds is most profitable to the London dairyman, whose trade is to sell as much milk as he can, and only to fatten his cows for the butcher when necessity compels him.

A Yorkshire cow in a London dairy establishment is seldom calculated to give less than 20 quarts of milk daily, for the first four months after dropping her calf, and many of this breed have been known to give from 30 to 40 quarts of milk daily for a few weeks after calving. In Mr. BIGGS' dairy, 20 quarts a day is the average quantity of a great proportion of his best cows, and many of them would continue in milk all the year round; but as this would be injurious to the aninals, and would diminish the yield in the succeeding year, they are intentionally run dry about six weeks before the time of calving.

The whole quantity of milk produced in 12 months, by one of those Yorkshire cows, when fed as in the London dairies, can not be less than 4000 quarts or 1000 gallons. The retail price of new milk is 16*d.* per gallon, and when sold wholesale to the milkman, the price realized by the dairyman is not less than 1*s.* per gallon; so that from this data it appears that a cow, giving 1000 gallons per annum, produces 50*l.* worth of milk during that period. Of course, the feeding is very liberal, and from the high price of green food in the metropolis, is necessarily very expensive. The milking and feeding in Mr. BIGGS' dairy is as follows:

4 A. M. milked. A good milker can milk 16 cows in 2½ hours.
4 " 1 bushel basket of brewers' grains to every two cows.
6 " 3 bushel of Swedes, or Mangold Wurzel to every two cows.
7 " 1 truss of hay to every 12 cows.
9 " Water; which is the only time they are allowed to drink during the 24 hours in winter, and each cow drinks about 24 quarts. In summer, water is given twice.
11¼ " 1 bushel of grain to two cows.
1 P. M., Milked again.
2 " 3 bushels of roots to two cows.
3¼ " 1 truss of hay to every eight cows.
In summer the green food consists of clover, Italian rye grass, or Vetches.

The cows are milked twice a day, which occupies about 2½ hours each time. The cow-houses are cleaned out five times every day, and the gutters kept sweet by allowing water to flow through them. The cows are thoroughly cleaned and combed once a week.

From the foregoing data, the following calculation of the annual expense of house-feeding a London dairy cow may be deduced:

Winter Food, from 1st October to 1st May (212 days.)

212 bushels of grains, at 6*d.*,	£5	6	0
13¼ tons of Swedes and Mangold, with the tops, at 20*s.*,	13	5	0
1 ton of hay, at 90*s.*,	4	10	0

Summer Food, from 1st May to 1st October (153 days.)

11¼ tons of grass, clover, or Vetches, at 20*s.*,	11	10	0
753 bushels of grains (or an equivalent), at 6*d.*,	3	16	6
Interest on capital, 16*l.*, at 5 per cent.,	0	16	0
Hazardous insurance, or annual loss,	0	16	0
Attendance, milking, &c.,	1	5	0
Total expense,	£41	4	6

Produce per Cow.

1000 gallons of milk, at 1*s.*,	£50	0	0
Calf,	1	0	0
Manure,	4	0	0
	£55	0	0
Deduct expense,	41	4	6
Profit,	£13	15	6

The daily expense is nearly 2*s.* 3*d.* per cow, and the daily yield of milk throughout the year nearly 2¾ gallons; and no London dairyman will long keep a cow that does not give 2½ gallons per day. In the above calculation no charge has been made for rent of premises; but even although 1*l.* per cow be struck off for this item, the profit is still abundant.

In speaking thus highly of the Yorkshire, as in every way well adapted to the purposes of the

metropolitan dairyman, it must be admitted that she is neither so good for a cheese or butter dairy as some of the smaller breeds. In the former case, quantity of milk is the desideratum, while in the two latter it is quality or richness. Were the Yorkshire cow employed either for the production of cheese or butter, the refuse—whey, and butter milk, or skimmed milk—would be much greater than that yielded by milk of a richer quality; and, in consequence of this, the profits would be considerably diminished. In a milk dairy there is no refuse; and should the consumers in large towns complain of the inferior quality of the milk sold to them, they should remember that they can not enjoy the luxuries of the country and those of the town at one and the same time. The consumer is entitled to be served with the milk as it comes from the cow; but when he insists on having grass milk in the middle of winter, he has no reason to complain should his importunity force the milk-seller to adopt the harmless device of counterfeiting an article to please his customer's eye, by the infusion of a drop of burnt sugar, to give the milk the rich yellow appearance which it usually possesses when the cows are fed on grass.—*Mr. Hazton, in "How to Choose a Good Milk Cow."*

GUANO, SUPERPHOSPHATE OF LIME, AND CHAPPEL'S FERTILIZER FOR WHEAT.—Last fall I cut two acres of corn off to seed down wheat. Part of the land was a mellow loam, and part of it stony—the stone a gray sand stone. I measured it off into three pieces—two pieces half an acre each, the other one acre, in the middle, and drilled in the wheat with one of MOORE'S patent grain drills, the first week of October. On one-half an acre I sowed 150 pounds Peruvian guano before sowing; on the other I sowed 160 pounds of superphosphate of lime one week after the wheat came up; and on the one acre piece 600 pounds of CHAPPELL'S fertilizer before drilling the wheat in. The guano cost $4.50, besides preparing it for use; the superphosphate $4.80, and the fertilizer $8.60. There was no manure of any other kind put on either piece. For want of barn room I did not cut and put each lot separate; I can not therefore state the yield as accurately as I would like. Last fall I could see very little difference in either piece, but in the spring the guanoed piece had a darker green appearance, and was thicker on the ground than either of the other pieces. When the wheat came out in head, the guano piece was about four inches taller than the others, and those who helped cut it, with myself, say that there is about one-third more to the ground than on either of the others; the wheat better filled, and a better yield of straw.

Last fall I plowed in 160 pounds guano on three-fourths of an acre of corn stalk ground, where I had corn two years in succession, the ground inclining to clay, and where the corn was the smallest in the field. On a half acre, rather better land, I plowed in six large ox cart loads of horse stable manure, kept under cover; the land was also manured in the spring for the second crop of corn. Between these two pieces I could see no difference in the wheat when cut, except that the manured was riper two or three days sooner, owing, I suppose, to the land being higher. The guano in both cases showed itself to the drill marks.

My conclusion is, that guano is cheaper than manure for wheat, as it costs less per acre. We have to pay $1.50 for an ox cart load of manure in West Chester, and haul it three miles, which is worth half a dollar more. When I haul wood to West Chester, I haul manure as a back load, or I could not haul it for that price. I would prefer good barnyard manure to either of the other three, if I could make enough on the farm for each field. But the farm being out of order when I purchased, I can't make enough as yet, using, as I do, part of it for potatoes in the spring. I put some Patagonian guano and superphosphate of lime in the furrow for potatoes, along side of manure this spring, and when dug I may give you the results of the experiments.

The kind of wheat raised was the Mediterranean, drilled one bushel and three pecks per acre. *J. F. I., in Pennsylvania Farm Journal for August.*

WOOD GAS IN GERMANY.—Two years ago, Dr. PETER KOPFER, in Munich, invented this kind of gas for light; but, in order to make it practicable by suitable apparatus, he invited to a share in his invention Mr. E. R. BREISACH, an eminent practical chemist in Augsburg, to whom the merit is due of having brought it to general use in many cities of Germany and Switzerland. Mr. BREISACH published a report in the *Ausburg Allegmeine Zeitung*, 20th May last, in which he says it is beyond cavil that wood gas can be supplied and used on the largest scale. The streets of Bayrouth (a large city in Bavaria), are lighted with that gas, and eye witnesses from all parts of the country, confirm unanimously that in brilliancy it is far superior to coal gas. The intensity of its light is solely ascribed to chemical purity. For my investigations here in Bayrouth, I have made use as well of BUNSEN'S Photometer as of ordinary wax light, as I did in former investigations at Augsburg with coal gas, and I found an average, as the result of fifteen experiments on different days, and at different hours of the day, that under a pressure of 6-7 millimetres, and with a breadth of flame of 21 lines, and a composition of gas of 5 feet per hour, 15 3-10 power of light is produced, while coal gas, under the same conditions, yields only 10-12 light power. For private consumers it may be agreeable to be informed that with flat burners, consuming 4 7-10 cubic feet per hour, they have a light power of 14 7-10, and with 3 1-10 cubic feet, a light power of 8.

Should further experiments confirm the above statements, the use of wood gas will become general in this country, where wood so abundantly abounds.

WHEAT FLY, ERRONEOUSLY CALLED "WEEVIL."

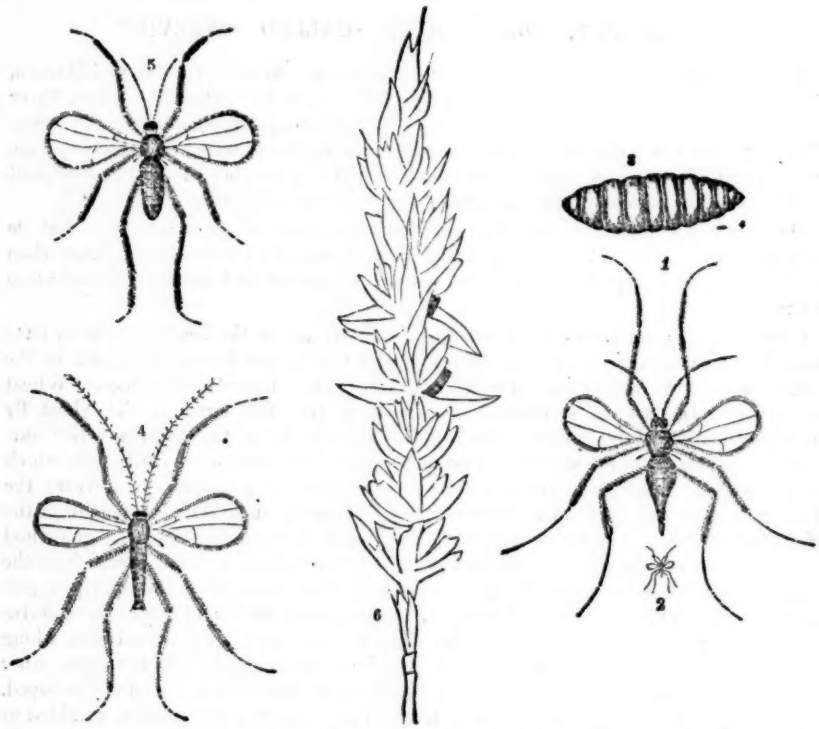
THE scientific name of this insect, according to LATREILLE, KOLLAR, CURTIS, and HARRIS, is *Cecidomyia tritici*. Like the Hessian fly (*Cecidomyia destructor*), the wheat fly or midge belongs to the order *Diptera*, LINNÆUS, (two-winged flies), and to the genus *Tipulidæ*, until it was divided by LATREILLE, there being one hundred and thirty species, by forming the new genus *Cecidomyia*, which includes a number of flies that deposit their eggs on the ears and leaves of wheat, and other cereal plants.

Figure 2 in the plate is intended to represent the insect at its natural size, but its body being only about a line in length (the 12th of an inch), the drawing is larger than the fly. Figure 1 represents the female much magnified, and figure 4 the male also magnified.

Farmers seeing numerous little orange-colored worms in the heads of wheat, have naturally believed them to be the offspring of a weevil, and hence they speak of the malady as "the worm" or "the weevil" in their grain. The proper name is "Wheat fly," whose habits are unlike those of the Hessian fly. The larvæ of the wheat fly undergo pupation in the ground; those of the Hessian fly in the sheaths which surround the stems of wheat at or near first and second joints above the earth, from which the perfect insect emerges. The wheat fly produces but one generation in a year; the Hessian fly produces two. The larvæ of the Hessian fly suck their support from the juices that flow in the stems of growing plants, while those of the wheat fly gnaw and eat the kernels of wheat. Hessian flies cause wheat to crinkle and fall down from the weakness of the straw near the ground; wheat flies cause the heads to ripen prematurely, and the glumes or chaff to open, giving yellow birds and others an opportunity to devour the worms on the grain. The female wheat fly is armed with a long retractile ovipositor, with which she penetrates the glumes and deposits her eggs, either on the young seeds or in the middle of the blossom, from which a seed is developed. The larvæ jump on being touched; they have no feet, are of a citron color, wrinkled or warty at the side edges; the head terminates in a point, and the posterior end is truncated. The pupa is slender, pointed at both ends, and of a reddish color. Figure 3 represents the pupa greatly magnified.

The Rev. WILLIAM KIRBY, of England, was the first to give a scientific description of this midge, and apply to it the term *tritici*, the genitive of *triticum* (wheat.) Dr. HARRIS and the lamented WILLIS GAYLORD were among the first to describe the wheat fly in this country. Mr. GAYLORD copied the drawings of it in a prize essay, published in the *Transactions of the New York State Agricultural Society* for 1843, from KOLLAR'S work, as translated and illustrated by J. and M. LOUDON, of London, in 1840.

Dr. FITCH, of Salem, in this State, has studied this insect for some years, and published in the *Quarterly Journal of Agriculture and Science*, and in the *Transactions of the New York State Agricultural Society* for 1845, the fullest account extant of its natural history. Mr. S. W. JEWETT says the wheat fly first appeared in Western Vermont in 1820; (*N. E. Farmer, Vol.* 19, *p.* 301;) but it was not until the years 1828 and 1829 that it became so abundant as to attract the attention of the public. In former years, when Maine was more of a wheat-growing State than it has been in the last decade, the *Maine Farmer* said: "A million dollars would not pay the damage it has done to the State of Maine alone." Dr. FITCH, who resides in Washington county, estimated the injury done to the wheat crops in that county in a few previous years at $500,000. Indeed, the farmers in the Hudson river counties and along the Mohawk were induced to abandon wheat-culture mainly to avoid the ravages of the wheat fly. Ten years ago, according to Mr. GAYLORD, it first appeared in Onondaga county; it is now in the Valley of the Genesee; but with what results time alone can determine.



DESCRIPTION OF PLATE.—Fig. 1, Female Wheat Fly, magnified; 2, Natural size; 3, Pupa or chrysalis, magnified; 4, Male, magnified. Fig. 5, *C. tergata;* 6, Head of wheat, showing the Larvæ deposited on the kernels.

The only reliable preventive of damage from this insect hitherto found is, to abstain from wheat-culture in neighborhoods where it prevails to an injurious extent. Early seeding is generally recommended by those wheat-growers who have had to combat this enemy. It is exposed to the depredations of other insects which deposit their ova in the larvæ of the *Cecidomyia tritici*, and the parasites hatching, devour the maggots of the wheat fly.

Figure 5 represents another variety of *Cecidomyia*, called *C. tergata*, which differs but little in color from the insect already briefly described. There are other varieties of wheat flies with scientific distinctions, but they differ so little from the *Cecidomyia tritici* that the distinctions made are of no practical value to the farmer.

Insects injurious to the farmer are on the increase in this country, and we have often expressed our regret that agricultural entomology should receive so little attention from agricultural societies and naturalists. As the pupa of the wheat fly passes the winter but an inch or so under ground, it is possible that fall plowing will turn up these chrysalids, and expose them to be eaten by birds, moles, and other insectivorous animals. It is not likely that freezing will kill the pupa of any fly burried slightly in the earth. Birds and toads are the natural enemies of the young of all insects, and they should be kept—or at least not harmed—that they may multiply and destroy insect depredators. Insects multiply preternaturally because man exterminates their enemies, and thereby nullifies the balance of organic nature.

MAPES' IMPROVED SUPERPHOSPHATE OF LIME.

ONCE more we are under the necessity of referring to this article. It is not that we have any pecuniary interest in this matter, or that, as Mr. MAPES' asserts, we are sold to puff the superphosphate manufactured by a rival house. We are personally unacquainted with Mr. MAPES, Mr. DE BURG, Mr. PATTERSON, and all other manufacturers of superphosphate. Their commercial interests sink into insignificance when compared with the chemico-agricultural principles involved in this question—principles which, to our view, lie at the very foundation of a judicious rotation of crops, and of a rational system of agriculture. From the introduction of superphosphate of lime we anticipate great improvements in American agriculture. We have as high an opinion of the value of superphosphate as a fertilizer as has Mr. MAPES; and we have as earnestly advocated its extensive use. What we object to in Mr. MAPES is his extravagant praise of his own catch-penny "improvement" in his *Working Farmer*—his recommending it as the best and cheapest manure for *all* crops, and his absurdly ridiculous assertion that his "improved superphosphate of lime" can not be manufactured in England for one hundred dollars per ton, and that, to his certain knowledge, if it could be, it would immediately take precedence of all other manures.

Of the articles in which we have stated our reasons for the views we entertain on this subject Mr. MAPES has taken no notice. Opinions without reasons are of little consequence, but as we have previously given the reasons, we may be pardoned for again stating, as briefly as possible, our opinions on this subject.

As regards the value of superphosphate of lime, we know that for turnips and ruta bagas it is *the best manure in the world*, but to obtain its full effect it must be *drilled with the seed*. In consequence of this, the improvement of Mr. MAPES, which consists in the addition of Peruvian guano and sulphate of ammonia to the mixture, is a *decided injury*, as these substances are injurious to the germination of the seed when drilled with it. For clover, mangel wurzel, cabbages, carrots, celery, lettuce, and tomatoes, superphosphate is a good manure, though were both the same price we should prefer Peruvian guano. For wheat, barley, oats, potatoes, and, we believe, though we have no experiments of our own to sustain the opinion, that for corn and timothy superphosphate of lime, in ninety-nine cases out of one hundred, will be found of no essential value. These opinions are directly opposed to the teachings of that large class of agricultural chemists to which Mr. MAPES belongs, who think that the composition of the ashes of plants afford a true index of the relative proportion in which the elements of plants should exist in the manure applied to them. This is a very plausible deduction, but, unfortunately, like many other beautiful theories, experiments and the experience of practical men prove it to be unsound. For instance: the ash of wheat and of the cereal grains generally contains 50 per cent. phosphoric acid, while the ash of turnips and ruta bagas contains only 10 per cent. Yet an extensive series of carefully conducted experiments, as well as the universal experience and practice of English farmers, prove that phosphoric acid is of no direct benefit to wheat and to the cereals generally, while for turnips and ruta bagas it is the most essential element of a manure. Thousands of tons of superphosphate are annually used in England as a manure for turnips, while from personal observation we know that superphosphate is never used as a manure for wheat, and is not even recommended by the manufacturer as a manure for any of the cereals.

Again, this *improved* superphosphate of lime, according to Mr. MAPES' certain knowledge, can not be manufactured in England for less than $100 per ton. This we have previously shown to be a very silly mistake, inasmuch as phosphate of lime, sulphuric acid, guano, and sulphate of ammonia, the ingredients which Mr. MAPES says he puts

in his manure, are cheaper in London than in New York; and further, we have said, and are able to prove, that if S. W. JOHNSON'S analysis of MAPES' improved superphosphate of lime can be relied upon, there is a superphosphate of lime made in London, in every respect as good as Mr. MAPES', and of which many thousand tons are annually sold at wholesale for $28.22 per ton.

This brings us to another point. The analysis of "MAPES' improved superphosphate of lime" by S. W. JOHNSON, published in the *Country Gentleman* of March 3d, has been pronounced by Mr. MAPES erroneous; and he stated that the error lay so palpably on the face of it, that if no one else pointed it out he should feel obliged to do it himself. For the credit of science be it recorded, that there is at least one other chemist in the United States beside Mr. MAPES who has discovered the errors of Mr. JOHNSON'S analysis. This learned individual is Dr. ENDERLIN, of New York—according to Mr. MAPES one of the first chemists of the age, and a gentleman who, according to his own statements, has made many valuable discoveries in chemical science. We are rather surprised that such a great and learned man should be so much a sycophant as this reply to S. W. JOHNSON indicates.

Were Mr. JOHNSON at home we should, of course, not interfere in the controversy; but as that gentleman is now in Europe, it may not be out of place to examine briefly this attack on his scientific reputation.

The first great error Dr. ENDERLIN points out is, that Mr. JOHNSON calls the phosphate of lime found in bones, coprolithes, apatite, &c., &c., "neutral" phosphate instead of "basic" phosphate; he gives the true composition, but makes a mistake in the name. To correct this grevious nominal error, the learned critic devotes two columns of closely printed matter. Now, Mr. JOHNSON was writing for practical agriculturists, and wished to make his meaning as intelligible as possible. He doubtless knew, as well as the profound Dr. E., that there were other compounds of phosphoric acid and lime; but he also knew that the only two compounds that concerned the agriculturist in relation to superphosphate were the bone earth phosphate of lime, and the superphosphate of lime; the one insoluble in water, the other quite soluble. Now, to convert the one into the other we add sulphuric acid, which takes away a portion of lime, producing a compound containing more phosphoric acid than the original phosphate. Mr. JOHNSON calls the first compound *neutral* phosphate, and the other the *acid* phosphate. Can Dr. E. give us two names that would convey a more distinct idea of the two compounds?

Another error is thus stated: "That no phosphoric acid is *set free* which could combine with the undecomposed phosphate (as Mr. JOHNSON thinks to be the case) is easily to be understood from the above exposition of the chemical process." The exposition is this: the phosphate of lime contains three atoms of lime united with one atom of phosphoric acid; the superphosphate of lime contains one atom of lime united with one atom of phosphoric acid. Now, when we add to phosphate of lime two atoms of sulphuric acid, two of the lime are taken away, and the remaining atom of lime is united with the atom of phosphoric acid. Admitting this exposition to be true, is not phosphoric acid *set free*, and does it not unite with the undecomposed phosphate, as Mr. JOHNSON supposed? We can understand the process in no other way. The phosphoric acid is *combined* with the *whole* of the lime; the two atoms of lime do not exist separately. When part of the lime is taken away the phosphoric acid united with it must, for ought we can see to the contrary, be *set free* prior to its combination with the remaining undecomposed phosphate whereby it forms the superphosphate of lime. This is the second great error of Mr. JOHNSON.

The third is still more egregious, and is thus stated: "That no *free sulphuric acid* can be present in such a manure when the named proportions of sulphuric acid and bone earth are employed, and the mixture is carefully and thoroughly stirred up and left at rest for a sufficient time, is perfectly evident. Nevertheless, Mr. JOHNSON found, against all chem-

ical possibility, in 'MAPES' improved,' 20.98 per cent. *free sulphuric acid.* * * When we find such an analysis we can not but have doubts respecting the ability and experience of the analyst." This, we presume, is the error which Mr. MAPES said lay so plainly on the face of the analysis. Let us examine it a little. It is true that phosphate of lime and sulphuric acid can not be brought into *direct chemical* contact without decomposition. For instance: were both in *solution* it would be "against all chemical possibility" to find free sulphuric acid and undecomposed phosphate of lime. But in a dry mixture, as when calcined bones and sulphuric acid are mixed together, this direct chemical contact does not necessarily take place, and consequently the sulphuric acid and phosphate of lime may exist in such a mixture without chemical action.

We recollect once trying to convert "half-inch bones" into superphosphate of lime. The bones were first moistened with the proper quantity of water, and then sulphuric acid, at intervals, added in sufficient quantity to more than convert the whole into superphosphate. The mixture was well and thoroughly stirred, and occasionally turned over for two months, yet *not half the bones were acted on by the sulphuric acid*—the outside of the bones merely were decomposed. Does any one suppose that in such a mixture it is "against all chemical possibility" for free sulphuric acid and undecomposed phosphate of lime to exist?

Again: When conducting some experiments on a large scale in the Rothamsted laboratory on the manufacture of superphosphate, we found that it was impossible to make a good manure unless the substance used was ground to an impalpable powder. Thus, animal charcoal, (we presume the article which Mr. MAPES uses in the manufacture of his manure,) we found could not be decomposed unless finely ground. We have used 100 lbs. of sulphuric acid to 100 lbs. of animal charcoal, and had still, "against all chemical possibility," after well stirring and allowing it to remain a sufficient length of time, a considerable quantity of undecomposed phosphate and *free sulphuric acid.*

About fifteen months ago we had sent us a sample of "MAPES' improved superphosphate of lime. Judging from appearances we thought that the article was manufactured from the unground animal charcoal, and that not more than half of it was acted on by sulphuric acid—a conclusion we afterwards found to be correct from an analysis by Dr. ANTISEL. We have no doubt this article contained free sulphuric acid, as it most certainly did undecomposed phosphate. Since then we have seen other samples of MAPES' "improved," and conclude that he now grinds his animal charcoal; at all events, it is now a much better manufactured article—yet still it is not only possible, but we think quite probable that it contains *free sulphuric acid* as well as undecomposed phosphate of lime. So much for the third error of Mr. JOHNSON.

The fourth mistake is thus set forth. Speaking of Mr. JOHNSON'S analysis, our critic says: "We in vain ask, Where are the constituents of guano, the oxalic, uric, hydrochloric acids, which in MAPES' are present in the form of water, oxalate of ammonia, chloride of ammonium, and oxalate of lime? Where is the potash, the urea capable of being converted into carbonate of ammonia? Where is the sulphate of ammonia, which is present in large quantities in the improved superphosphate?" A fine piece of rhetoric this, Dr. ENDERLIN! You are an adept at mystifying a subject, and at showing off your profound learning to your agricultural readers! We would ask, Is your oxalic acid, chlorine, the carbon and hydrogen of urea compounds, &c., of much agricultural value? We have been in the habit of considering them of little worth. Are we mistaken? We had supposed that if you knew the amount of ammonia or nitrogen a compound contained, you were in possession of all that was necessary to determine the amount and value of its urates, urea, oxalate, and other salts of ammonia. This Mr. JOHNSON has determined. He found that 'MAPES' improved' contained 15.80 per cent. of organic matter and salts of ammonia, and that this organic matter, &c., contains 2½ lbs. of ammonia; the other 13½ lbs. of organic matter contain your oxalic acid, carbon, hydro-

gen, &c., and is worth, we think, about as much as 13½ lbs of dried peat. The potash you so anxiously inquire after Mr. JOHNSON did not find. Even admitting the manure to be made as Mr. MAPES states, we do not see how it could contain more than half a per cent. of potash.

Another charge brought against Mr. JOHNSON is, that he found 37 per cent. of sulphate of lime, and that, to let his readers know what it was, he called it "gypsum" or "plaster." It is admitted that this amount of plaster is present, but it is stated that it was not added, but is necessarily present—superphosphate can not be made without it. This is all true, and Mr. JOHNSON said nothing to the contrary. He found 37 per cent. of "plaster," and so wrote it down in his analysis. Does Mr. MAPES intend us to understand that his artificially made plaster is any better than we obtain from natural sources for $2.50 per ton? This is the last error charged to Mr. JOHNSON.

We must again apologize to that gentleman for taking any notice of so ridiculous and contemptible an attack on his reputation as a chemist. The manner, however, in which the article is heralded and paraded by Mr. MAPES would lead agriculturists to think that this criticism was well founded, and that Mr. JOHNSON had made great chemical and analytical mistakes. On the contrary, his analysis is the only one that we have seen which shows the real value of the "improved superphosphate of lime"—it is the only one that gives us the percentage of soluble superphosphate of lime and of the ammonia.—J. H.

WASHINGTON'S WEALTH—THE MOUNT VERNON ESTATE.—The following extract is taken from an old book published by RUSSELL & WEST, Boston, in the year 1800, entitled "Washington's Political Legacies," and dedicated by the editors to Mrs. MARTHA WASHINGTON:

"General WASHINGTON was at one time probably one of the greatest land-holders in the United States. His annual receipt from his estates amounted, in 1776, to four thousand pounds sterling. His property, at the same period, was estimated to be worth one hundred and sixty thousand pounds sterling, which is a very large sum in federal money, and was considered a very great fortune at that early day in this country for any one man to possess.

"His estate at Mount Vernon alone was computed in 1787 to consist of nine thousand acres of land, of which enough was in cultivation to produce, in a single year, ten thousand bushels of corn, and seven thousand bushels of wheat. In a succeeding year he raised two hundred lambs, sowed twenty-seven bushels of flax seed, and planted seven hundred bushels of potatoes. He desisted, it is said, from planting tobacco, which was then extensively raised in Virginia, for the purpose of setting an example, by employing his extensive means in the introduction and fostering of such articles of domestic use and necessity as would ultimately tend to the best advantage of his country. His domestics, at the same time, were industriously employed in manufacturing woolen cloth and linen in sufficient quantities to clothe his numerous household, which numbered nearly one thousand persons."

DIGGING WELLS IN QUICK SAND.—Thinking that it may be of importance to some of your readers, I will give some of my experience in digging wells in quick sand. My father was digging a well where the quick sand run in so bad that he was led to contrive some way to remedy the evil resulting from it. His plan is, (when you get down where the sand runs in so as to prevent working at advantage,) to make a platform to lay the wall on out of plank by pinning them together; place this on the bottom, and then lay a wall of good hard brick and water-lime. When you get above where there will be any danger of the sand caving in, you can go on and dig the well as deep as you please, and the wall will settle down as fast as you take out the sand under it. We have settled a well two feet after it had stood for years. I was led to send this from hearing of the difficulty they had in digging wells at Geneva. A FARMER'S SON.—*Seneca Falls, N. Y.*

Horticultural Department.

CONDUCTED BY P. BARRY.

NOTES ON ORCHARDS AND ORCHARD FRUITS.

THERE is, after all, nothing like experience. In rambling, the other day, over the orchards of a gentleman who has for many years been engaged in fruit-culture for market, we were very strongly impressed with the importance of making a judicious selection of varieties. Selecting fruits to be grown for market is a totally different affair from selecting for family use. In the orchards referred to we observed some six or eight trees of the *Early Joe* apple; they were large beautiful trees, that had been top-grafted some seven or eight years ago, and might bear at least five or six bushels each. Now, the *Early Joe* is a delicious and beautiful little apple, and worthy a place among choice summer apples for a family garden, but it is frequently spotted and knurly, and it has not size enough to please the public eye in the market. It is a waste of time to carry small fruits to market, however excellent they may be. When this gentleman grafted so many trees of the *Early Joe* it had just been brought fairly to notice, and every one who saw and tasted it admired its beauty and excellence; it was thought that it might take well in market, but experience has proved that a crop of fair fruit is uncertain, and that, at best, it can not compete with larger sorts, that would bear twice the quantity of fruit. These trees are now about being grafted over. The *Early Harvest* and *Red Astracan* are two early apples that must be profitable to grow, as both bear well, are large, fair, handsome, and excellent. In the same orchard referred to, the *Summer Queen* proves to be unprofitable; it bears good crops, but the fruit is generally imperfect, and it comes in when peaches are abundant, and apples not in great demand. The *Early Strawberry*, in the same orchard, rarely produces a good crop — the fruit blights and falls immediately after it sets; this, however must be owing to some local cause, as it generally does exceedingly well in this section. We know one orchardist who has a tree or two that yields him more annually than any other trees he has, and the dealer who annually buys them has informed us that he can sell it more readily, and have larger profits on it, than on any other variety of summer apple he can get. The *Sweet Bough* was another variety we saw prettly largely planted. This, the gentleman informed us, was a profitable variety — large, handsome, and always saleable, but he said it was less valuable to him on account of ripening at the moment when his peach crop usually required all his attention. We saw magnificent crops of *Northern Spy* and *Rhode Island Greening*, and these, with the *Baldwin*, were found the most profitable winter varieties in the orchard. *Talman's Sweeting*, we believe, was included; we saw fine crops of this. We must say further in regard to the *Northern Spy*, which has been said to be unprofitable on account of producing so large a proportion of imperfect fruit, that we have never seen a more uniform crop of smooth, beautiful fruit; they were, however, not more than half grown, and just beginning to show faint touches of red. This apple is remarkable for being later in putting forth its leaves, and blossoming and setting its fruit than any other variety grown here in this section, resembling, in this particular, the celebrated *Rawles' Janet*, of the south-west. This peculiar trait of late flowering enables the *Spy* to escape injury from cold winds and frosts, that not unfrequently prove fatal to other varieties, and, as the orchardist referred to remarked, is a very strong recommendation in its favor for all localities subject to cold and changeable spring weather.

In managing such trees as the *Northern Spy*, whose habit is vigorous, erect, and

dense, an important point is to keep the heads open to the sun and air; the trees in this orchard were quite open, the branches curved outward, and the fruits all exposed as much as they should be. The *Rhode Island Greening*, and all such trees, with a spreading, irregular habit, take care of themselves pretty much in this respect.

We observed that in many cases the trees leaned considerably to the north-east on account of the prevailing winds beating against them from the south-west, and in nearly every case, and especially with pear trees in this condition, some injury had been inflicted on the sunny side of the trunk, apparently having been done while the trees were yet young. It is very obvious that the trunk of a tree in such a position, one side exposed to the rays of the sun *all day* and at *all seasons*, must suffer. In winter it is frozen hard at night, and early next morning a strong sun pours down its melting rays upon it. This points to the necessity for staking, or otherwise securing trees in an *upright position*, and also to *keep the heads pretty near the ground*. A fine *Bartlett* pear tree loaded with fruit met our eye, and brought it on the carpet. "I find it impossible," said the orchardist, "to get good *Bartlett* trees without top-grafting others of large size. When I plant small trees, they bear themselves to death before they get to be of any considerable size." The fact is, the gentleman's soil is a very warm light sand, *entirely too light* for the pear, and the *Bartlett* in it being so precocious, and finding a stinted supply of food, bears heavily, and makes no growth. Following this up for a few years closes up the career, of course. The pear needs a *substantial* soil, and in such light soils as we have referred to, the trees to prosper at all for any considerable length of time must have frequent and liberal dressings of compost, and every season be pruned. With this treatment a good growth is secured, as well as a good crop of fruit.

Leaving the apples and pears we turned into the peach orchard. "Just as you came up," said the gentleman, "I was going into my *Crawford's Early* to beat off a portion of the crop." Certainly they needed it, but it should have been done a month ago. If one half of this great crop had been taken off then, the food they have since appropriated would have passed to the benefit of those left, and *now* they would have shown it. It is just when trees begin to grow slowly and feebly that they begin to bear *abundantly*, and thus comes on decrepitude. We touched upon this important point in a late number of the *Farmer*, and we are happy to know that it had some effect; there are thousands of cases, however, it did not reach. The *Early York* was a fair crop, and promises to be ripe about the last week in August; the *Yellow Alberge*, or *Barnard's*, was bearing well, and we were told that had it not been for this variety last season, the crop would have been a complete failure. These odds and ends of observation may possibly be the means of calling the attention of unexperienced persons to certain points that might be overlooked.

New Fruits.—Among the new fruits that have attracted attention this season, *McAvoy's Superior* strawberry has been one of the most prominent. As far as we know, it has come up pretty well to expectation, except in one or two cases. It is a pistillate variety, large ovate, occasionally with a short neck. Color—a rich crimson scarlet, with pale colored yellowish seeds. Flesh—red, juicy, and find flavored, but not equal to *Burr's New Pine*. The berries do not fill up quite plump at the point, which is a slight imperfection. It is an abundant bearer, and altogether a valuable fruit. At the exhibition of the Pennsylvania Horticultural Society, Mr. Cope produced specimens measuring *five and a half inches in circumference*. This is, at least, *one-third* larger than any we have seen.

Longworth's Prolific is pronounced by many the largest and best of hermaphrodite sorts. Our *Genesee* is the best of this class we have yet grown—a large conical-necked berry of a brilliant color, firm, and of good quality.

The *Monroe Scarlet*, a pistillate variety, is hardy and uncommonly productive. It has been proved in many parts of the country, and is every where well spoken of.

Walker's Hermaphrodite Seedling is a distinct, very dark conical fruit, of medium size, very prolific, and of good quality.

The *Moyamensing Pine* has not done so well with us as in New Jersey and Pennsylvania.

The *Bicton Pine* is a new English variety, hermaphrodite, bears moderately, large and handsome, white, with a tint of red in the sun. Quality—good, not high flavored.

CHERRIES.—The *Belle d' Orleans* is an early and a very beautiful white variety—ripens with the *Early Purple*, is larger and every way finer than *Bauman's May*, and as early.

The *Monstreuse de Mezel* is a very large, dark-mahogany colored fruit, of fair quality—probably the largest cherry we grow. Tree—an irregular, strong grower, and apparently hardy.

Gov. Wood continues unsurpassed for beauty and excellence. Size—medium, very productive, and tree hardy.

Delicate and *Mammoth* are said to be two new sorts of great merit among Dr. KIRTLAND'S seedlings.

HAVING given some attention to horticulture and its kindred subjects for a few years past, I am anxious to learn more of the habits and modes of destruction of those pests, which, under various names, mostly destroy our labors. If some more thorough and effectual method of extermination than has yet been devised shall not be discovered, the attempt to raise fruit or trees in this vicinity much longer will be almost futile. There is scarcely an apple tree in this region, so far as I have examined, that is not injured or destroyed by the borer, though every means that I have seen recommended have been tried. The fruit, also, shares the same fate—wormy and defective. The curculio, too, has been more busy, if possible, than ever; hardly a plum or apricot has been left, and cherries were all punctured and much injured.

I gave a thorough trial to every method that has been published for their destruction: tying cotton round the trees—jarring them—smoking them with sulphur, chips, feathers, old leather, &c.—dusting the trees for a long time with earth, ashes, &c.—but the rascals only seemed to work the faster, evidently regarding them all as "weak devices of the enemy." They strongly reminded me of the old man who thought to drive the boy from his trees by throwing grass, sticks, &c., but could only bring him down with stones. Something more effectual must be done. Perhaps pigs and poultry would do the work after a while, but they are not admissible in small gardens, and only in separate enclosures.

The squash-borer is again making ravages in our vines, and have nearly destroyed them. E. LEFFINGWELL.—*Aurora, August* 9, 1853.

Sad tidings these from Aurora, one of the most delightful places in all the Empire State, and one, too, in which horticulture is taking deep root and flourishing amazingly. Have *patience*, sir—we must all practice this virtue, for we have all difficulties to contend with, and it is well that we have, else our energies would grow rusty. Next season your crops may be spared by these pests, and you will be wondering where they are all gone.

Almost every season we are visited by thousands—yes, millions of aphides and Pear tree slugs, the destruction of which is expensive and tedious. This year we have none—nowhere can they be found—perhaps they have gone to Aurora. The curculio, too, has left us a more abundant crop of plums and apricots than usual; our trees are loaded to breaking. But the study of the habits of insects is most important to all who desire to be successful in gardening. Let us recommend to you the new edition of "*Harris' Treatise on Insects Injurious to Vegetation.*" It will furnish you much valuable information.

STRAWBERRY CULTURE.—A very intelligent correspondent of the *Pennsylvania Farm Journal* gives the results of his experience as follows:

"Strawberries being the earliest fruit to ripen, can have no competition in the market, and under ordinary treatment will yield large profits to the producer, though varying in magnitude according to the variety grown, the quality of the soil, and the cultivation they receive. The kind most generally cultivated as a market crop is *Hovey's Seedling*, with about one-tenth their number of large *Early Scarlet*, distributed throughout the plantation as fertilizers. The *McAvoy's Superior* is a more vigorous and hardy pistillate plant, and yielded a larger crop of large-sized berries than any other that came under my observation this year. The *Genesee* and *Cambridge* are hermaphrodite plants, and bore a full crop of large early fruit, ripening on the 28th of 5th month last, and many of the berries measured from 3 to 3¼ inches in circumference. If they continue to be as productive as they were this season, they will be valuable fertilizers.

"Having a variety of soil in cultivation, I have grown strawberries on all kinds, from light blowing sand to stiff timothy bottom, and have learned to avoid either extreme, and now select a good loam of medium texture, tolerably high and undulating, so as freely to carry off the surface water, cover it with manure, which should be well incorporated with the soil; early in the spring mark the rows four feet apart, twelve to fifteen inches distant in them. Put one hermaprodite to every ten of the pistillates, rejecting the male, or barren plants, which produce no fruit, but blossom and grow vigorously, and soon overrun and crowd out the more fruitful ones.

"The beds should be kept mellow and free from weeds the first season, the runners carefully distributed over the ground so as to form the beds with regularity; after which but little culture is needed. I use a subsoil plow, which mellows the alleys without throwing earth on the plants, the benefits of which are clearly shown, especially in a dry season, by the superior vigor and productiveness of the plants near the edge of the beds over those in the centre; the circumference extending from twelve to fifteen inches on either side, and the beds being three feet in width, allowing one foot for alleys, the plants nearly all receive nourishment from the moisture and atmospheric influence absorbed by the soil in the alleys thus deeply pulverized.

"In 1850 I planted six acres of *Hovey's Seedling* on the plan above described, in stiff clay land, one-half of which was low meadow ground, the other ascending to upland, from which were gathered and marked last year over 300 bushels of fruit; but in the latter part of summer the timothy and herd grass proved better adapted to the low ground by taking possession, and this year the strawberries there were abandoned, and the grass mown for hay, leaving three acres of upland in strawberries which were dressed, viz: the alleys loosened with a subsoil plow, and the stools of clover, weeds, &c., taken from the beds and placed in the alleys, which served the double purpose of retaining moisture and keeping the berries clean; the yield was 154 bushels of fruit, for which I received $4 per bushel, and paid 64 cents for picking, and 50 cents (12½ per cent. commission) for selling. Twelve dollars per acre would be a full compensation for the little culture they received, making the account stand thus:

To interest on three acres of land, at $100,	$18.00
" culture,	36.00
" picking 154 bushels, at 64 cents,	98.56
" 12½ per cent. commission for selling,	77.00
	$229.56
By 154 bushels, at $4,	$616.00
Expenses,	229.56
Profit on three acres,	$386,44
Equal to $128.81 per acre.	

"The first year the plants are set there are no returns, but the value of the plants at the close of succeeding years would be a full remuneration. Were I to draw an estimate from some of my specimen beds, a few rods in length, which are thoroughly cultivated, the results above stated would appear like a failure; but for large farmers, where land is plenty, and laborers scarce, the great question is not how much per cent. profit can be made on *one* acre, but by what mode can the most clear money be made on all the land they have to cultivate with the laborers at their command. Over 100 bushels of corn may be grown on an acre of ground. Yet more clear money can be made on twenty acres yielding 50 bushels each.

"One of my neighbors having but a few acres of land, devotes proper attention to something less than three acres of strawberries, keeping the ground well manured, mellow, and free from weeds; the expense of which he has not been able to furnish, but he informed me that he received over $1100 dollars for the fruit this year. WILLIAM PARRY.—*Cinnaminson, N. J.*

Editor's Table.

Artificial Manures.—The editor of the *Working Farmer* appears to dislike our remarks in the July number on Artificial Manures. This probably arises from his not having read them attentively when he replied to our article. We called attention to his own ably written puff of his "improved superphosphate of lime," which he says "is now in such demand that the manufacturers can not supply *one-tenth of the quantity asked for*, notwithstanding their factory is capable of delivering ten tons or more per day." This manure is sold at fifty dollars a ton; and if there is a demand for ten times more than the manufacturers can make, then it reaches the large sum of five thousand dollars a day, thirty thousand a week, and a million and a half dollars in fifty weeks, or less than a year!

Prof. Mapes should be proud to have his editorial brethren invite the public to take note of so magnificent a business. He says: "The improved superphosphate of lime was introduced by *ourself* but a little more than twelve months ago." Now, if there is any truth in the learned Professor, the demand exceeds a million and a half dollars' worth in a year! But what he appears most to dislike is our "plain statement of the abuses to which analytical chemistry is liable in its application to artificial manures, and rural affairs generally, without reference to Mr. Mapes." Mr. M. coolly appropriates to himself remarks applied expressly to "rural affairs generally, without reference to Mr. M." in particular, in illustration of the "abuses of analytical chemistry," and then he falsely says that we accuse him of "having made two qualities of manure, giving out small quantities of a better quality for experiments, and of publishing in a hundred papers the effects procured by these lesser quantities." We have never said that Mr. Mapes, or his manufacturers, had practised a fraud of the kind named; but we have stated, as was due to our numerous readers, how such an imposition was entirely practicable by any one having a moderate knowledge of the theory of agricultural chemistry. This statement was so plain, and the garment appeared to fit so well, that the Professor voluntarily put it on, and insists on his right to wear it. That being purely a matter of taste, we can have no dispute on the subject. Mr. M. says: "We are well aware that this article, as well as some others which have formerly appeared in the *Genesee Farmer*, are not from the pen of the senior editor, Dr. Lee; for he informed us in Washington at the time of the meeting of the National Society, that the articles which had appeared in that journal in reference to ourself were not written by himself, nor had his sanction, and that if he had been at home they would not have appeared." It is quite true that we told both Mr. Mapes and Mr. King, editor of the *Boston Journal of Agriculture*, in Washington, in February, when the first annual meeting of the National Society was held, that we did not write the articles to which they had taken exceptions, and that we regretted their appearance, for we desired to be on good terms with all men, but especially with the conductors of agricultural papers. These editors, however, were not satisfied with this frank and truthful disclaimer, and took no pains to conceal from us the fact that they are dishonorable men. Thus regarding them, we have felt it our duty to put our readers on their guard against humbug and successful quackery in that quarter. The proprietor of the *Genesee Farmer*, (who wrote the article in the July number headed Artificial Manures,) has an unconquerable aversion to the mixing up of truth and falsehood in agricultural literature and science for any purpose, and especially for the mercenary one of speculation. Man really needs but little during the few years he stays on earth, and with industry and economy all his wants may be easily and honestly supplied.

The Greatest Wheat-growing County in the Union.—Monroe county, of which Rochester is the capital, returned, at the last census, 1,441,653 bushels of wheat, grown in the year 1849. In that year the six New England States produced 1,039,112 bushels, being 402,541 bushels less than the crop of a single small county in Western New York.

Livingston county, which joins Monroe on the south, returned 1,111,986 bushels, exceeding the crop of all New England by 72,874 bushels. The crops of Ontario and Niagara counties fall but little below a million bushels each. We shall, in our next, publish the agricultural statistics of each county in the State, and follow it with abstracts of those of Ohio and other States, as collected under State laws, and since the United States census was taken.

SUPPLY OF GUANO.—An immense deposit of guano has been discovered in the Indian Ocean, between Mauritius and Calcutta. It has been analyzed by Professor ANDERSON, of Glasgow, and is now in the hands of Professor WAY, of London, for analysis. Four kinds of it have been brought to England, two of which are of superior quality, resembling the guano of Saldanha Bay; the other two are comparatively inferior. Steps are being taken to make the guano available to British farmers.

POULTRY AND POULTRY HOUSES.—The finest lot of improved breeds of poultry, including nearly all new races and families, imported and kept pure, that we have any where seen, is the property of Dr. GROSS, East Liberty, near Pittsburgh. His poultry house and yard are well arranged; and such of our readers in Pennsylvania as shall attend its State Fair, to be held near East Liberty, the last of this month, will find a visit to Dr. G.'s establishment both interesting and instructive.

IMPORTED STOCK.—From an announcement in our advertising columns, it will be seen that a rare chance is offered breeders and farmers generally, for improving their herds. The Madison County Importing Company will sell their entire stock of imported animals, at London, September 27. We have not seen the animals, but we are assured they are of the first quality.

PREMIUM CORN CROPS.—Six different counties in Ohio awarded premiums on twenty-five acres of corn last year, whose average product was 127 bushels per acre. The largest yield was in Stark county, two acres producing 326 bushels, or 163 per acre. The annual crop of Ohio is about sixty million bushels.

CHLOROFORM FOR PROPULSON.—The Paris correspondent of the *Commercial Advertiser* says: "The vapor of chloroform as a motive power is to be applied upon an immense scale."

STATE FAIRS FOR 1853.

New York, at Saratoga,	Sept. 20, 21, 22, 23
Michigan, at Detroit,	Sept. 27, 29, 30
Vermont,	Sept. 13, 14, 15
Pennsylvania, at Pittsburg,	Sept. 27, 28, 29
Kentucky, at Lexington,	Sept. 13 to 16
Ohio, at Dayton,	Sept. 20, 21, 22, 23
New Hampshire,	Oct. 5, 6, 7
Maryland,	Oct. 25, 26, 27, 28
Illinois, at Springfield,	Oct. 11, 12, 13, 14
Indiana, at Lafayette,	Oct. 12, 13, 14
Wisconsin, at Watertown,	Oct. 4 to 7
Virginia, at Richmond,	Nov. 1, 2, 3, 4
Lower Canada Board of Agriculture, Annual Exhibition,	Sept. 26, to 27
Upper Canada,	Oct. 5 to 7
Southern Central Agricultural Society, Augusta, Ga.,	Oct. 17 to 20

☞ ADVERTISEMENTS, to secure insertion in the *Farmer*, must be received as early as the 10th of the previous month, and be of such a character as to be of interest to farmers; we publish no other. Terms—$2 for every hundred words each insertion, *paid in advance.*

Inquiries and Answers.

(JOHN MCCLELLAND.) *Johnston's Agricultural Chemistry* would probably suit you. We can send it you, postage paid, for $1.50.

(JESSE OSBORN, Paoli, Orange Co., Ind.) There is now no doubt of the fact that grain and grass can be cut with machinery, and that, too, as well, and we think better, and certainly cheaper, than by manual labor. If you are a very large farmer, we should think it best to have two machines, one for grain and the other for grass. There are, however, some excellent combined Reapers and Mowers, that answer well for both purposes. We cannot say which of the various machines now manufactured is *the best.* For a description of machines, price, &c., we would refer you to our advertising columns.

(WM. LAUGHLIN, Hookstown, Pa.) We are continually receiving complaints of the dishonest tricks of "Yankee sheep pedlars." As a general rule, it is not safe to purchase $400 bucks from them. Did we desire such a buck, we would trade only with some well-known, honorable importer. Have sent some Australian wheat; would have sent more, had it not been that the postage is so high *when not prepaid.*

WILL charred bones be of any profit on wheat, and would it answer the same purpose as ground bones? (1.)
Are tiles as durable for pipes as wood or lead? Would the water keep as fresh as in wood pipes? (2.)
I should like to hear Mr. D. P. BROOKS' experience through the columns of your valuable paper, if he has adopted cement. D. S. UMBEHOUR.—*Shirleysburg, Pa.*

(1.) We have seen charred bones applied to wheat without the least benefit to the crop. Ground bones are much the best for wheat, inasmuch as they contain 5 per cent. of nitrogen, or ten times as much as ordinary farm-yard manure. Charred bones will be of little *immediate* benefit to any crop, unless first converted into superphosphate by the addition of one-third their weight of sulphuric acid.

(2.) We think good clay pipes would be more durable than wood, but should like to hear from those who have had more experience on this and the other inquiry.

I wish to know, if any information can be given, how to kill the Tangle weed. W. M. CARPENTER.—*Erie, Madison county, N. Y.*

River Bank Nursery,

OPPOSITE THE RACE COURSE, ON NORTH ST. PAUL STREET.

Office, 106 State Street, Rochester, N. Y.

THE attention of Nurserymen, Orchardists, and Fruit Growers, is requested to our very thrifty and healthy stock of Fruit Trees. We believe the stock is equal, in all respects, to any other in the market, and will be sold at as low prices. We intend to make this a reliable establishment, and we solicit patronage with a strong confidence that we shall be able to give satisfaction. We have for sale this fall—

30,000 Apples, 3 and 4 years old.
35,000 do 2 do
100,000 do 1 do
5,000 Cherries, 2 years from bud.
15,000 do 1 do
500 Pears on Quince, 4 years from bud (now bearing.)
3,000 do do 2 do
2,000 do do 1 do
2,000 Peaches, 2 years from bud.
4,000 do 1 do

The above comprise all the varieties of merit. We have also an assortment of Plums, Apricots, Nectarines, &c., &c. Raspberries, Gooseberries, and Currants, in great variety. We also offer to Nurserymen—

150,000 Apple Seedling, 1 year old.
50,000 do 2 do
50,000 Cherry Seedlings, 1 year old.

All orders will be promptly and carefully executed, and no pains will be spared to give satisfaction.

GEO. H. CHERRY & Co.

☞ We particularly invite the attention of Western Nurserymen to our young stock. It is very thrifty, and can be removed with safety, as it has not been unnaturally forced, and will be sold at a reasonable price.

September 1, 1853.—2t.

Fruit and Ornamental Trees.

T. C. MAXWELL & BROS. would invite the attention of purchasers to the superior stock of Fruit and Ornamental Trees which they offer for sale this fall. Their Trees are of the most approved varieties, and *unexcelled* in health, vigor, and beauty; and they feel confident that they can give entire satisfaction to all who may favor them with their orders, both in prices and quality. Purchasers are requested to call and examine.

60,000 Apple Trees, large and thrifty.
20,000 Pear do more than half Dwarfs, of the best kinds, and unequalled in size and beauty.
20,000 Cherry Trees, first quality, in every respect.
5,000 Peach do one year from bud.
2,000 Plum do mostly on Peach.
2,000 Apricot do one and two years—fine.
2,000 Quince do
6,000 Grape Vines, mostly Isabella.
3,000 Mountain Ash Trees, large and fine.
1,000 Horse Chestnut Trees large and fine.
3,000 Balsam Fir Trees, two to four years in nursery—fine.
80,000 Arbor Vitæ, for Hedges—8 to 30 inches.

Also, a general assortment of smaller Fruits, Shrubs, Roses, &c.

☞ Trees carefully packed and promptly shipped.

Old Castle Nurseries, Geneva, N. Y., Sept. 1, 1853.—2t.

Great Auction Sale of Trees.

WM. R. PRINCE & CO., proprietors of the Linnæan Botanic Garden and Nurseries, Flushing, now announce that they intend selling, at auction, their immense stock of Fruit and Ornamental Trees and Shrubbery, of all sizes, on or about the 1st of October next, the ground being wanted for building-lots. This is the best opportunity ever presented for new nurseries to obtain full supplies, and for older ones to fill up deficiencies.

Complete Catalogues, and further information, will be sent to all who wish to attend the sale.

September 1.—1t.

Superior Seed Wheat.

A LARGE assortment of the best varieties of improved Seed Wheat, among which are the Golden Australian, China or Troy, White Flint, Hutchinson's Improved, Soule, and Mediterranean.

Seed Rye, of the best winter variety; also, a cheaper kind, suitable for the late fall and early spring pastures.

Field and Garden Seeds, of the various sorts.

R. L. ALLEN,

Sept. 1, 1853. 189 and 191 Water street, New York.

SAMUEL MOULSON,

AT THE OLD ROCHESTER NURSERY,

Office 36 Front Street, Rochester, N. Y.,

IS prepared to furnish inventories, to post-paid applicants, of the present very extensive stock of Nursery items, consisting in part of

120,000 Dwarf and Standard Pear Trees,
90,000 Apple Trees,
50,000 Peach "
30,000 Plum, Cherry, and Apricot; over
100,000 hardy Evergreens, and a fine selection of Weeping Deciduous Trees, Ornamental Shrubs, Hybrid Pepetual Roses, together with such novelties as may be classed strictly hardy. Also, a very limited assortment of half-hardy, such as Cryptomeria Japonica, Cedrus Deodora, &c.

The amateur, wishing prime fruits, of well-established repute, or the agriculturist, needing fine cropping, thoroughly-tested varieties, may rely upon the most careful execution of their orders.

The ornamental items are entirely grown in the Nursery, consequently none of the heavy losses are sustained that usually occur to recently imported subjects.

The Evergreens are very robust, and admirably furnished to the surface of the ground, none presenting the naked stems usual to imported plants.

Dealers are invited to give a call before making their purchases.

September 1, 1853.—1t.

Geneva Nurseries.

THESE Nurseries are located just half way between Syracuse and Rochester, being fifty miles from each place, and the facilities for shipping trees are equal to any in the State. Our stock of Trees is now extensive. Thirty thousand Cherry, 1 to 3 years old; thirty thousand Peach, 1 year; six thousand Plum, 1 year; one hundred and fifty thousand Apple, 1 to 3 years; five thousand European Mountain Ash, large size; together with a general assortment of other Trees.

STOCK FOR NURSERYMEN.

Five hundred thousand Apples, 1 to 2 years; twenty-five thousand Pear; ten thousand Plum; twenty-five thousand Cherry, five thousand Sweet Briar, 1 year from seed; five thousand European Ash; fifty thousand Osage Orange; twenty thousand White Cedar; five thousand Balsam Fir; six thousand Norway Spruce; two thousand Sugar Maple; two thousand Hemlock; five thousand Asparagus Roots, 1 and 2 years; three thousand Rhubarb; twenty thousand Basket Willow Cuttings. E. T. & E. SMITH.

Geneva, N. Y. Sept. 1, 1853.

Sale of Imported Stock.

"THE Madison County Importing Company," will offer for sale to the highest bidder, on the 27th of September next, their entire herd of stock, which has been selected by the first of judges from the best herds of England, and imported with great care. Their stock consists of 24 head of pure bred Short-Horns—14 Bulls from 1 to 3 years old, 8 Cows and Heifers, and 2 Calves; 20 Leicester Sheep, and 12 Suffolk Hogs.

The stock can be seen and examined at this place at any time till the day of sale.

Catalogues, giving name and pedigrees, can be had by addressing the Secretary, at this place, or at the office of the Ohio Cultivator, after September 1st.

Sale to commence at 10 o'clock, A. M.

JESSEE WATSON, President.

J. T. LACY, Secretary.

London, Madison county, Ohio Aug. 20, 1853.—1t.

Superphosphate.

NO expense has been spared in the combination of this most fertilizing manure, which contains all the nutritive properties of all plants. It is superior to most of the articles offered for sale under the same name, and is inferior to none, although sold at a much lower price. Put up in bags at $40 per ton of 2000 lbs., cash.

Office of the New York Superphosphate Manufacturing Company, No. 159 West street, New York.

VICTOR R. KNOWLES, Agent.

September 1, 1851.—3t.

First Premium Railroad or Endless Chain Horse Powers and Threshers.

WE will make it an object to all who want the above, to purchase of us.

Before buying, call at 68 State street, Rochester, and be convinced. BRIGGS & BROTHER.

September 1, 1853.

Bone-Dust Manure and Superphosphate of Lime.

THE EAGLE CHEMICAL COMPANY, having recently made extensive additions to their works on Staten Island, are now prepared to meet the increased demand for the above named invaluable manures, and are ready to supply the agriculturists with any quantity that may be required.

THE BONE-DUST MANURE will be of the same quality, and will be delivered at the same price, as that heretofore furnished to the farmers of Staten Island, New Jersey, and other parts of the United States. It will be ground into a fine powder, and warranted pure; and, being perfectly dry and well packed in clean barrels, can be transported at a small cost, either by steamboat or railroad.

The advantages of ground bones for manure are too well known by the experience of the past twenty years to make any further recommendation necessary.

THE SUPERPHOSPHATE OF LIME, or Sulphated Bones, may not, perhaps, be so well known in some parts of the United States as the former, as it is a comparatively recent mode of applying the same ingredients, but from the great results already obtained by the agriculturists in England and the United States, it is likely to be preferred to all other manures in use.

The proprietors of the Eagle Chemical Works have, for several years past, been extensively engaged in the manufacture of this article in England, where they have had the assistance of the most eminent agricultural chemists in Europe.

The *superphosphate* now prepared by them has been tested on every variety of soil crop in Europe, the United States, and the West Indies, with the most invariable success. The manufacturers do not hesitate to guarantee it to be the most perfect manure that can be made. No ingredients will be used until they have been carefully examined, and their purity tested; and the mode of preparing such ingredients, and the proportions used, will be such as the manufacturers have ascertained by long and patient application of chemical science, to be the most perfect, and which they have proved to be so, by the practical tests of agriculturists on almost every description of soil, and in every variety of climate.

It will always be kept at the highest standard of purity and excellence—every lot made will be carefully analyzed and tested before delivery. It is warranted to prove a more valuable manure than the best Peruvian guano, being both more immediate in its effects upon the plant, and of more permanent benefit to the soil, beside being less dangerous in its application.

It will be composed entirely of *Superphosphate of Lime*, combined with such proportions of *ammonia* and other ingredients as are necessary to restore that which has been taken from the soil by previous crops.

Raw bones, in addition to fat, or gelatine, are composed of *phosphoric acid* and lime combined, called phosphate of lime. It is the *phosphoric acid* that is of great value as manure to the agriculturist, and the object of applying sulphuric acid to dissolve them is, that by its alliance with the lime that is in the bones, the phosphoric acid is rendered more soluble, or easily dissolved by rain; and the difference between raw ground bones and dissolved bones may, in a plain way, be stated to consist in the fact that by a careful addition of the proper proportions of sulphuric acid, the phosphate of lime in the raw bones is converted partly into the sulphate of lime, which is a valuable manure, and a considerable portion of soluble phosphoric acid is left free to combine at once with the soil, in readiness to act on the plant.

Thus it is that a small quantity of Superphosphate of Lime will force a crop of turnips in greater weight than a larger quantity of raw ground bones, bringing them ready to the hoe at least ten days sooner. This is one of the most important properties of this phosphate, derived from its peculiar preparation; and it will always be found, where used, to cause such a speedy development of the plant's as to enable them to escape the ravages of the fly and wire-worm.

It is calculated that one bushel of this prepared Superphosphate is equal in its effects to six bushels of ground bones in a raw state. Thus, the concentrated form of this manure, and its small bulk, makes it exceedingly convenient, and diminishes the cost of transportation and handling; 250 to 350 pounds to the acre is sufficient for any ordinary condition of soil, and the whole cost will not probably be greater than the extra expense would be in the mere handling and carting the necessary quantity of stable manure to produce the same effect.

It may be sown broadcast, and plowed into the soil; or it may be drilled in with the seed. It may also be applied in the hills during the cultivation of corn, or other crops, when it will stimulate the most sluggish growth into immediate action.

It will be delivered in bags or barrels, in such quantities as may be required, at the price of 2¼ cents per pound, and each package will be branded "Superphosphate of Lime, Eagle Chemical Works, 62 Beaver street, New York."

Orders with cash, or satisfactory reference, to be sent to

ALFRED F. KEMP,

62 Beaver st., New York, Office Eagle Chemical Works.

September 1, 1853.

THE GREAT RESTORATIVE.

FEVER AND AGUE CURED BY DR. M'LANE'S LIVER PILLS.

MR. JONATHAN HOUGHAM, of West Union, Park county, Illinois, writes to the proprietors that he had suffered greatly from a severe and protracted attack of Fever and Ague, and was completely restored to health by the use of the Liver Pills alone. These Pills unquestionably possess great tonic properties, and can be taken with decided advantage for many diseases requiring invigorating remedies; but the Liver Pills stand pre-eminent as a means of restoring a disorganized liver to a healthy action; hence the great celebrity they have attained. The numerous formidable diseases arising from a diseased liver, which so long baffled the skill of the most eminent physicians of the United States, are now rendered easy of cure, thanks to the study and perseverance of the distinguished physician whose name this great medicine bears—a name which will descend to posterity as one deserving of gratitude. This invaluable medicine should always be kept within reach; and on the appearance of the earliest symptoms of diseased liver, it can be safely and usefully administered.

☞ Purchasers will be careful to ask for Dr. *M'Lane's Celebrated Liver Pills*, and take none else. There are other Pills, purporting to be Liver Pills, now before the public. Dr. M'Lane's Liver Pills, also his Celebrated Vermifuge, can now be had at all respectable Drug Stores in the United States and Canada.

DR. M'LANE'S VERMIFUGE.

DURING a practice of more than twenty years, Dr. M'Lane had attended innumerable patients afflicted with every form of worm disease, and was induced to apply all the energies of his mind to the discovery of a Vermifuge, or worm-destroyer, certain in its effects; the result of his labors is the American Worm Specific, now before the public, which is perfectly safe, and may be given alike to children of the most tender age, or to the aged adult; it purges mildly and subdues fever, and destroys worms with invariable success. It is easy of administration, and as it does not contain mercury in any form whatever, no restrictions are necessary with regard to drinking cold water, nor is it capable of doing the least injury to the tenderest infant. An incredible number of worms have been expelled by this great Vermifuge.

☞ Purchasers will please be careful to ask for Dr. *M'Lane's Celebrated Vermifuge*, and take none else. All other Vermifuges, in comparison are worthless. Dr. M'Lane's genuine Vermifuge, also his Celebrated Liver Pills, can now be had at all respectable Drug Stores in the United States and Canada.

Improved Fowls for Sale.

HAVING kept for several years the very best fowls to be procured, and having the past season added to my stock some exceedingly beautiful specimens, I have now a great number of fine young pairs, certainly as good as can be found in the country, which I will sell at a much lower price than that charged by fowl-dealers. I will sell the following varieties at five dollars per pair:

White Shanghæ, *Black Shanghæ*, *Buff Shanghæ*, and *Cochin China*; and *Brahma Pootra*, and *Speckled Shanghæs* (a very beautiful bird), at ten dollars per pair.

These fowls will be ready for delivery by the first of September, and I will coop them carefully, with feed, water, &c., and send by railroad or express, as desired, without charge, and warrant every fowl sent to be pure and fine. Orders are solicited. WM. VICK.

Rochester, N. Y., August 1, 1853.

Horse Powers,

ON the Endless-Chain principle, consisting of Emery's, Wheeler's, and White & Prentiss', the best manufacturers.

Threshers, Separators, and Winnowers, Combined Threshers and Separators.

The above are warranted to give satisfaction. For sale at the lowest cash prices, at the State Agricultural Warehouse. LONGETT & GRIFFING,

Sept. 1, 1853.—2t. No. 25 Cliff street, New York.

THE HORTICULTURIST,

And Journal of Rural Art and Rural Taste.

EDITED BY P. BARRY, AUTHOR OF THE "FRUIT GARDEN."

THE *Horticulturist*, as its name implies, is devoted to Horticulture and its kindred arts Rural Architecture and Landscape Gardening, and will keep its readers advised of every thing new on the subject, either in Europe or America. It is a Monthly Journal of forty-eight pages, beautifully printed on the finest paper and elegantly illustrated. In addition to numerous wood engravings, each number contains a full page engraving on stone, of some new, rare, and valuable fruit or flower, and is one of the most *beautiful* as well as the most useful Monthly Journals published in the world. We subjoin a few notices by the press, showing the estimation in which the work is held by our editorial brethren:

We are glad the work has fallen into such excellent hands.—*Louisville Journal.*

We feel that we are doing our readers a real service when we urge them to subscribe for this invaluable monthly.—*Weekly Democratic Press, Chicago.*

We congratulate the public on having so valuable a periodical as the Horticulturist within their reach.—*New York Day Book.*

Its contents are spirited and various, the selections judicious, the illustrations elaborate.—*New York Daily Times.*

A standard work of authority upon all subjects discussed or explained in it.—*Vicksburg Whig.*

There is no work in this country of greater value to the cultivator of fruits.—*Inquirer, Portland, Me.*

It is well got up; its articles able, various, and appropriate.—*Geneva Courier.*

Every man who has land enough for a garden should possess this work.—*Weedsport Advertiser.*

The plates alone are worth the year's subscription. The letter press is of a highly instructive character, and embraces a variety of topics. None who have a taste for the beautiful in nature should be without such a valuable publication.—*Hamilton (C. W.) Spectator.*

There is substantial profit as well as pleasure in cultivating taste in buildings, yards, gardens, &c., and the subscription price would be capital well invested by those who will attend to the contents of the Horticulturist.—*Daily Courier, Zanesville, Ohio.*

Any remarks of our own we fear would add nothing in comparison with the value of such a well conducted work. The plan of coloring the plates is decidedly beautiful, and no person interested in horticultural pursuits should be without it. It seems a wonder to us that horticulturists do not look more to their own interests, than to allow their monthly papers to be received without this indispensible accompaniment. The circulation ought to reach half a million. Although the number issued is already extensive, yet it should be increased, from the fact that it is a work of great merit.—*Port Byron (N. Y.) Gazette.*

This periodical is got up in excellent style, and well sustains its former reputation under its present management. *Middlebury (Vt.) Register.*

We are quite satisfied with the work, and are inclined to believe that, to the mass of readers, the work will be even more acceptible than it was under the charge of the accomplished Downing. We recommend the work cordially to the patronage of our friends and the public.—*Massachusetts Spy.*

Its contents embrace a variety of subjects, treated upon in the most scientific manner. The illustrations are numerous and well executed. We know of no other work of the kind on this continent that can compare with the Horticulturist.—*Daily Spectator, Hamilton.*

This magazine has lost nothing by falling into the hands of its present proprietor, Mr. VICK, of Rochester; for he maintains its neat typographical experience, while the new editor, Mr. BARRY brings to its editorial management abilities of a high order.—*Gazette, Keeseville, N. Y.*

The Horticulturist is almost invaluable to the fruit grower, and to the gardener, and it ought to be in the hands of every one. The new editor, Mr. BARRY, proves his eminent fitness for the post so lately filled by the lamented DOWNING.—*Watch Tower, Adrian, Mich.*

This publication embraces a wide field, and has something instructive for every reader. Its artistical embellishments and mechanical execution are of the highest order; for this we give credit to the publisher. Its editorials are practical, scientific, varied, and instructive. Its correspondence embraces some of the ablest horticultural writers in the Union.—*Register and Examiner, West Chester, Pa.*

This useful monthly, instead of losing interest as many feared it would in consequence of the death of its lamented proprietor and editor, Mr. DOWNING, continues to fully maintain its reputation. In fact the present editor and and publisher appear to be using their best endeavors to raise it higher in public estimation than before. It is an eminently practical work, and therefore well fulfills its promises. No one who has anything to do with gardens, trees, shrubs, plants, or flowers, should fail to be among its readers.—*News and Advertiser, Middletown, Conn.*

TERMS—$2 per year, in advance. The volume commenced on the 1st of January last, and we can supply back numbers from that time. Those who prefer can commence with the (half year) July number.

COLORED PLATES.—Still further to add to the value of the work, and meet the improving taste and increasing wants of the horticultural community, an edition is published with COLORED PLATES, each number containing a full page engraving of some new, rare, and valuable fruit or flower, correctly colored from nature by the best living artists in this line. This is a new and important feature, in this country. Price $4 a year, in advance.

Address JAMES VICK, JR., PUBLISHER, *Rochester, N. Y.*

THE WATER CURE JOURNAL.—A New Volume.—Now is the time to subscribe.—Published monthly, in a beautiful quarto. Illustrated with engravings, exhibiting the Structure, Anatomy, and Physiology of the Human Body, with familiar instructions to learners. It is emphatically a Journal of Health, designed to be a complete Family Guide in all diseases.

TERMS—Only One Dollar a Year, in Advance. Address, post-paid, FOWLERS AND WELLS, Clinton Hall, No. 131 Nassau Street, New York.

"The Water Cure Journal holds a high rank in the science of health, always ready, straightforward and plain spoken, it unfolds the laws of our physical nature without any pretensions to the technicalities of science, but in a form as attractive and refreshing as the sparkling element of which it treats."—*New York Tribune.*

THE ILLUSTRATED AMERICAN PHRENOLOGICAL JOURNAL—Devoted to Perenology, Mechanism, Education, Agriculture, the Natural Sciences, and General Intelligence, profusely illustrated with Engravings. Every family, and especially all young men and women, should have a copy. Published monthly at One Dollar a year. All letters should be post-paid, and directed to FOWLERS AND WELLS,
Clinton Hall, No. 131 Nassau-st., New York.

Young men about launching forth upon the activities of life, and anxious to start right, and understand their course, will find this JOURNAL a friend and monitor, to encourage them in virtue, shield them from vice, and to prepare them for usefulness and success in life. The various occupations will be discussed in the light of Phrenology and Physiology, so that every one may know in what pursuit he would be most likely to succeed.—PUBLISHERS.
July, 1853—4t.

Garden and Field Seeds,

FROM the new establishment of VANZANDT & BOWDISH, No. 114 State street, Rochester, N. Y., can be purchased of the merchants generally throughout the country, in papers or packages, on reasonable terms. Also, at the Agricultural Warehouse of E. D. HALLOCK, No. 24 Exchange street, Rochester, N. Y.

The Seeds from this establishment can be relied on as being of the best quality. They are mostly imported, or grown for us by the *Eastern Shakers*, and are warranted good and true. Full directions for cultivation printed on each paper and package.
VANZANDT & BOWDISH.
Rochester, May 1, 1853.

Atkins' Self-raking Reaper.

THIS machine is now offered to the public, and warranted to be a good self-raking reaper. It is also believed to be a good mower, but not yet having been sufficiently tested in grass (though it soon will be), is not warranted to be equal to a machine made mainly or wholly to mow.

The raking apparatus is of novel and very simple construction, and not liable to derangement, and every farmer who has seen it in the harvest field, says it performs the raking better than a man can possibly do it.

Price of machines at Chicago, $175, of which $75 must be paid on giving the order, $50 upon successful trial, and $50 in note payable 1st December.

The machines are most thoroughly built and warranted.

☞ Descriptive circulars, with cuts, sent to post-paid applications. J. S. WRIGHT.
"Prairie Farmer" Warehouse, Chicago, July, 1853.—3t

Superphosphate of Lime,

IN BAGS and Barrels, made by C. B. DU BURG, with full directions for use,—warranted a pure and genuine article—for sale by GEO. DAVENPORT,
No. 5 Commercial, corner of Chatham street, Boston, Agent for the manufacturer.

Also, for sale, Ground Bone, Bone Dust, Burnt Bone, Guano, and Grass Seeds, of reliable quality. [4-tf]

Hickok's Patent Improved Cider Mill and Press.

WE have been appointed sole agents for the sale of this mill and press in the city of New York. This is the most approved mill now in use. Catalogues with description and drawing will be forwarded by addressing us post-paid. Price $40. LONGETT & GRIFFING.
August 1, 1853.—2t. 25 Cliff street, New York.

Decidedly the Best and Cheapest Poultry Book in the Union.

NOW READY,

MINER'S DOMESTIC POULTRY BOOK.

ORDERS received for over Two Thousand copies of this book in advance of its publication, which is unprecedented in the sale of any work ever issued on this subject.

This is an entirely new work, and one of the most valuable books for *practical uses* that has ever been published. In preparing it, the main object was to study the *actual wants* of the Fowl-breeder, more than their fancy notions, besides containing full directions for breeding, raising, and keeping the several kinds that come under consideration: when and how originated; a large number of cuts from life, of some of the best breeds in the country; prices at which they are selling in the market; together with such other matter as was thought necessary. The varieties at present are so great, that a book published five years ago is now behind the age. This work contains a vast amount of new and useful matter, and in the number of its illustrations, great amount of practical matter, and its fine typographical execution, is ahead of any other work on Poultry ever published. The book contains over

ONE HUNDRED AND THIRTY-FIVE PORTRAITS

of the most perfect specimens of newly imported and native breeds of fowls, and other cuts which have cost from $700 to $800—being double the number found in any similar book, while the price is only one-half as much. The names of all the new and imported breeds are given, so that any person being at all interested in them, can here find their full description, origin, &c., &c. Recollect

ONLY FIFTY CENTS

for the most complete book on Poultry ever published.

Dr. J. C. Bennett, of Fort des Moines, Iowa, formerly of Great Falls, N. H., author of "A Poultry Book," and one of the most extensive breeders of Poultry in this country, to whom the proof sheets were sent, writes:

"No book ever published will *compare* with yours, as to *splendid and life-like engravings*, and will unquestionably be the best book published on the subject, and will sell in preference to any other work. *It will receive my untiring energy for its sale all over the United States*, and I have no doubt 50,000 copies will be sold the first year."

As it is expected this work will have a very extensive sale, it will be an object for book dealers, pedlers, agents, and others, to make early application.

The book is handsomely printed, on good paper, 12 mo. size, containing 256 pages, and sold at the low price of 50 cents paper, and 75 cents in full cloth binding. Those wanting books sent to their address will send in their orders early.

Books sent by mail to any part of the Union on receipt of the following:

For one copy, in paper,	50 cts.	Cloth,	75 cts.
For two copies do.	$1.00.	do.	$1.38
For three copies, do.	1.25.	do.	2.00
For four copies, do.	1.50.	do.	2.50

Postage pre-paid on receipt of nine cents for paper, and twelve cents for cloth.

Books sold to pedlers, agents, and others, at reduced prices. Address, post-paid, GEO. W. FISHER,
Bookseller and Publisher.
Rochester, N. Y., August 1, 1853.

Hickok's Patent Portable Cider Mill,

USED in various portions of the Union, (and conceded on all hands to be the best cider mill made,) took the following premiums in 1852:

Silver Medal at the fair of the American Institute, N. Y.

Premium at the fair of the Franklin Institute, Philadelphia.

First Premium at State fair at Utica, at the Columbia and Rensselear county fairs, and a *Diploma* at the Westchester fair.

The price of the mill is $40, free of freight or insurance.
Manufactured by W. O. HICKOK, Harrisburg, Pa.
Sold by HIGGINS & CALKINS, Castile Wyoming county.
C. E. YOUNG, 159 State street, Buffalo.
PROTT & CHEW, Geneva, N. Y.

See page 247 this Journal.
[aug.—3t.]

Suffolk and Essex Pigs,

PURE breed, for sale by EBEN WIGHT,
Ausust 1, 1853.—3t. Dedham, Mass.

AGRICULTURAL IMPLEMENT MANUFACTORY.

CORNER OF CAROLINE & THIRD STREET,
BUFFALO, N. Y.

Pitts' Patent Separator—Improved Double Plain Horse Power—Pitts' Corn & Cob Mills, &c.

I HEREBY give notice that since the extension of the patent right on my Machine for Threshing and Cleaning Grain, I have removed to Buffalo, N. Y., where I have permantly located, and erected a large establishment for the future manufacture of the above Machines.

The Separator has been enlarged, improved, and rendered more permanent and durable in all its parts, while the Horse Power for strength, ease, durability and cheapness of repair is not surpassed by any in the United States. This Power is warranted to stand the full strength of eight horses—also to give as much effective or useful power when driven by one or two horses as any other Horse Power, whether constructed on the endless chain or lever principle. It was put on trial at the great exhibition of Horse Powers and Threshing Machines at Geneva, July last, 1852, where it received the New York State Agricultural Society's First Premium "for the best Horse Power for general purposes." The Separator, at the same trial, also received the Society's First Premium.

My Machines will thresh and clean from three to five hundred bushels of wheat per day, and other grain in proportion.

Two hundred of the above Machines are for sale at the Agricultural Works of the subscriber in this city, all warranted to be a better article than can be purchased at any other shop, and if they do not prove on trial to be so, I will take them off the hands of the purchasers at the price they may pay me for them.

I further notify all persons who are purchasing Horse Powers and Separators to be used in California or Oregon, that I will hold them accountable for any infringments of the rights secured to me by letters patent in the above Machines, as I am manufacturing a Horse Power and Separator expressly designed for that section.

All orders for the above Machines hereafter addressed to JOHN A. PITTS, Buffalo, N. Y., will receive prompt attention.

JOHN A. PITTS,
May, 1853—tf. Buffalo, N. Y.

French Zinc Paint.

THIS new and beautiful article of Paint is now offered to the trade and public, ground in prepared linseed oil, for the first time in this country. It has been used successfully in France for the last five years, where it has superseded white Lead as a paint.

The French Zinc when properly prepared and used, makes the most brilliant and durable white in use, and is entirely free from all poisonous qualities.

The French Zinc is not more expensive than white lead, and is prepared in such a manner that it requires no farther preparation for use, than to thin it with Turpentine or raw Oil to the consistency of white lead paint.

The French Zinc is very much whiter, and has a better body, than the New Jersey Zinc.

The French Zinc is offered dry, and prepared as above, in quantities to suit purchasers, at the Manufacturer's Depot, No. 17 Buffalo st., Rochester, N. Y.

July, 1852. M. F. REYNOLDS.

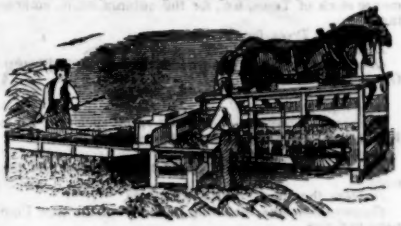
Fertilizers.

Peruvian Guano, $45 per ton.
Superphosphate of Lime, 2½ cts. per lb.
Bone Sawings, or Meal, $2.50, per brl.
Turnings and Crushed, $2.25 "
Pulverized Charcoal, $1.00 "
Potash Scrapings, 3½ to 4 cts. per lb.
Plaster, ground, $1.12½ to 1.25 per bbl.
Sulphuric Acids, 2¼ to 2½ cts. per lb.
For sale at the State Agricultural Warehouse.

LONGETT & GRIFFING.
June 1, 1853—4t. No. 25 Cliff street, New York.

HALLOCK'S Ag'l Warehouse and Seed Store.

No. 24, Exchange street, Rochester, N. Y.



[Emery's Patent Premium Railroad Horse Power, Threshing Machine and Separator.]

THE subscriber, late from the establishment of Emery & Co., manufacturers at Albany, where he has been engaged for the past six years, has been appointed their SOLE AGENT in Rochester and Western New York, for the sale of

Emery's celebrated Railroad Horse Powers and Threshing Machines; Circular and Cross-cut Saw Mills, Feed Mills, Corn-stock and Hay-Cutters, &c.

adapted to the Power, and now offers them at manufacturer's prices, with the transportation added, and subject to the warrantee, as follows: "To work to the satisfaction of purchasers as represented in circulars and catalogues, or to be returned within three months, and full purchase money to be refunded." The attention of farmers is solicited, and a careful investigation into the construction of this Power and its comparative merits, as well as price requested, before purchasing elsewhere. He is also agent for their

COMBINED REAPER AND MOWER,

and keeps constantly on hand Plows, Hay-Cutters, Corn Shellers, Seed Planters, &c., &c., comprising a complete and extensive stock of Agricultural and Horticultural Implements generally, together with a full assortment of Field and Garden Seeds, of the best Imported and Shaker growth.

He is also agent for the sale of Seymour's Grain Drills and Broadcast Sowers, Wheel Cultivators, Gang Plows, Clover Hullers, Cider Mills, Clover Gatherers, Horse Rakes, Scythes and Snaths, Hand Rakes, Grind Stones, &c.

He will be prepared to furnish dealers with Drum and Taylors's well known Scythes; also Manure, Straw, and Hay Forks, Snaths, Rifles, and other haying tools at manufacturers's prices, wholesale and retail.

Particular attention is called to a NEW PLOW, which is believed to be the best cast iron Plow ever offered, and which is warranted to do better work, with less expense of team, than any other Plow heretofore sold in Rochester—while the price is less than any other equally well finished.

The "uniform one-price cash system" will be adopted, with prices as low as the cost of articles, and just compensation for labor and time, will allow.

Farmers and others are invited to call and examine the stock of Machines and Implements, and are assured that no effort shall be wanting to meet promptly the wants of a direriminating public.

☞ Circulars and Catalogues furnished gratis on application personally or by mail. E. D. HALLOCK,
June 1, 1853—tf No. 24, Exchange street, Rochester.

Extra Improved Superphosphate of Lime for Sale.

THE subscriber, at additional expense, has recently made important improvements in the manufacture of this well tested and valuable manure, and is now prepared to furnish an article assuredly equal, if not superior, to any in the market, at the lowest cash prices.

Put in bags of 50, 100, and 150 lbs. each, and branded "No. 1 Superphospate of Lime." Manufactured and sold by WM. PATTERSON,
Divison Street Wharf, Newark, N. J.

AGENTS:

HASKELL, MERRICK & BULL, 10 Gould-st., N. Y.
H. EMERY, Esq., Agricultural Warehouse, Albany.
PRUTTER & FULLER, Hallowell Maine.
E. GREEN, Esq., Easton, Penn.
S. CHASE, Esq., Middletown, Conn.
July, 1853—4t.

Fruit and Ornamental Trees, &c., &c.

THE subscribers have the pleasure of announcing an immense stock of Trees, &c., for the autumn trade, embracing—

Standard Trees, for Orchards.
Dwarf and Pyramidal Trees, for Gardens.
Ornamental Trees, for Streets, Parks, and Pleasure Grounds.
Rare and Beautiful Lawn Trees.
New and Rare Weeping Trees.
Evergreen Trees, embracing the rarest species of Pines, Firs, Spruces, Yews, Cedars, Junipers, &c.
Hardy Flowering Shrubs.
Roses, of all classes, and embracing the newest and best sorts.
Dahlias, the finest English prize sorts.
Chrysanthemums, including the finest of the new Pompone varieties.
Phlorex and *Pæonies*, superb collections.
Bedding Plants, a complete assortment.
Bulbous Roots, just imported from Holland, and of the first quality.
Hedge Plants.
Box Edging.
Rhubarb, Asparagus, &c., &c.

The favorable season has given every thing a vigorous and fine growth.

All orders, whether for large or small quantities, executed with the greatest care, and in strict compliance with the wishes of the purchaser.

Packing done in the most secure and skilful manner, so that parcels can be transmitted thousands of miles in safety. Nurserymen and dealers in Trees will be supplied on the most liberal terms.

The following Catalogues are sent, *gratis* and *pre-paid*, to all who apply and enclose one postage stamp for each:

No. 1, Descriptive Catalogue of Fruits.
No. 2, do do Ornamental Trees, &c.
No. 3, do do Dahlias, Green House Plants, &c.
No. 4, Wholesale Catalogue.

ELLWANGER & BARRY,
Mount Hope Nurseries, Rochester, N. Y.
September 1, 1853.—1t.

Highland Nurseries, Newburg, N. Y.

A. SAUL & CO., in calling the attention of their patrons, and the public in general, to their very extensive stock of

FRUIT AND ORNAMENTAL TREES, SHRUBS &c.,

which they offer for sale the coming autumn, would remark, that owing to the past summer being one of the most favorable for the growth of Trees which they have had for many years in this locality, their stock of Trees and Plants, in every department, is *larger*, more *thrifty*, and in every respect finer than usual.

To particularize within the limits of an advertisement would be impossible. They therefore refer planters and dealers in Trees to their Catalogue, a copy of which will be sent by mail to all *post-paid* applicants for the same, on enclosing a postage stamp.

They invite especial attention to their *very large* stock of Standard and Dwarf Pear and Cherry Trees; also, Plum, Peach, Apricot, and Nectarine Trees; as well as Grape Vines, Gooseberries, Currants, Raspberries, Strawberries, &c., in every known variety, together with all other plants, &c., usually kept by the trade.

500,000 strong two years old Osage Orange Plants, in three different sizes, at $10, $8, and $6 per 1,000.

Buckthorn Plants, two years old, at $8 per 1,000.

Highland Nurseries, Newburg, N. Y., Sept. 1, 1853.—2t.

Locke Nursery.

THE subscriber offers for sale at his Nursery in Locke—

One hundred thousand Pear Seedlings, 1 year old, at $8 and $10 per thousand.

Twenty-five thousand Cherry Seedlings, 1 year old, at $5 per hundred.

Five thousand Peaches, 1 and 2 years old, budded, at $10 and $12 per hundred.

Fifteen hundred Cherries, 1 year old, budded, of fine growth, at $18 per hundred.

Together with a good assortment of Apples, Pears, and Plums, from 2 to 4 years old, budded, of the best varieties.

All communications will receive prompt attention addressed to J. D. CONKLIN,
Locke, Cayuga county, N. Y.

September 1, 1853.—1t*

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Premium Strawberries.

WM. R. PRINCE & CO., Flushing, will send their new Suplementary Catalogue of Trees, Shrubs, and Plants, for 1853 and '54, comprising the choicest collection of Strawberries existing in America or Europe, many of which are in no other collection, and have never before been offered to the public. They are guaranteed to be identical with the descriptions in the April and May numbers of the Horticulturist, and free from all spurious admixture, including the new Ohio varieties, which are so often met with in a mixed State. The prices for all will be as low, and many lower, than charged elsewhere, and they will be packed so as to ensure their safe arrival. Applications for Catalogues to be post-paid, with stamps enclosed.

Sept. 1, 1853.—1t.

New York Agricultural Warehouse.

HORSE POWERS, Threshers, Fan Mills, Smut Machines, Grain Drills, Hay Presses, Grain Mills, Corn and Cob Crushers, Cider Mills, and a large assortment of Plows, and all kinds of Agricultural and Horticultural Implements.

Peruvian Guano, Superphosphate of Lime, Bone Dust, and other fertilizers, of the most superior kinds.

R. L. ALLEN,
Sept. 1, 1853. 189 and 191 Water street, New York.

The Practical and Scientific Farmer's own Paper

THE GENESEE FARMER,

A MONTHLY JOURNAL OF

AGRICULTURE AND HORTICULTURE,

ILLUSTRATED WITH NUMEROUS ENGRAVINGS OF

Farm Buildings, Domestic Animals, Implements, &c.

VOLUME XIV, FOR 1853.

DANIEL LEE, JAMES VICK, JR., & JOSEPH HARRIS, EDITORS.

P. BARRY, Conductor of Horticultural Department.

Fifty Cents a Year, in Advance.

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Subscription money, if properly enclosed, may be sent (post-paid or free) at the risk of the Publisher. Address to

DANIEL LEE,
November, 1852. *Rochester, N. Y.*

STEREOTYPED BY J. W. BROWN, ROCHESTER, N. Y.